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COLOUR AND INTERIOR DECORATION*

IF we compare modern ideas on the use of colour in interior decoration with those accepted by the Victorians, it is evident that the general standard of taste is considerably higher. Possibly it may be objected that it could not well be lower or more barbarous, and indeed it is difficult to imagine anything worse than the average dining-room of, say, a hundred years ago: Terra-cotta red wall paper, shiny brown paint, ormolu clock and ornaments, heavy mahogany furniture and the sacred aspidistras.

But if we go back to the later eighteenth century and the days of the brothers Adam, it would seem that taste (though confined, as the phraseology of the period aptly puts it, to persons of refinement and education) was more educated than it is at the present day.

The harmonious decoration of the interior of a building generally coincides with a period when furniture and fittings were of good, and sometimes exquisite, design; when the interior of the home was considered as important a matter as its exterior, and when, in a word, no sensible man who had claims to refinement or education would have attempted to deal with this delicate and difficult problem unaided.

Even as far back as Tudor times this was no doubt the case, for in those houses—too few, alas, where the original scheme of interior decoration has been preserved—we see evidences of a master hand in the careful planning of a scheme which included fittings, furniture, hangings, stained glass and the like. And we observe the influence of travel as a factor in determining interior decoration; how, in every case, the influence of a foreign style of decoration precedes the change in architectural design. Thus, in late Tudor times, we see the influence of the Renaissance in Italy in decorative design, just as at a later period the influence of Classic architecture can be observed as the precursor of the beautiful work of the brothers Adam. If we analyse the charm of interior decoration of this period, we find that it depends largely on two things: the treatment of the interior as part and parcel of the design of the building, and secondly our attention to detail which neglects no factor in the room or rooms to be considered.

It would be curious to examine the case for cause and effect as between an expert appreciation of harmonious and artistic dwelling places and the refined manners of the period. Was the former due to the latter, or was the reverse the case? Possibly action and reaction operated imperceptibly so that each advance in taste was accompanied by more courtly and ceremonious address, but one cannot but regret that with the advent of the self-made man of the industrial age all this was lost or submerged by the stress of different activities.

The idea that the architect or designer could properly, or with advantage, be called in to complete the mere shell of a building, ceased to be commonly held and our mothers and aunts dealt with such questions to their own satisfaction, but with truly appalling results, of which surely the most absurd was the idea of having rooms of certain "styles" unrelated to the house or its occupants.

Since those days many books giving "hints" or advice to the layman and his wife on the subject of interior decoration have appeared. There is, no doubt, a demand for such publications which will never, it would appear, be exhausted. Some are futile and obvious, some are useful, but one cannot regard them as real solutions of the problem, because the whole matter depends not on "hints" nor on tabulated schemes of decoration, which remind one of patent medicines in the number and variety of the disorders they are supposed to cure. Many of the suggestions and schemes are, in themselves, excellent, but their realisation, unless guided by experience, is frequently astonishing and sometimes devastating in effect.

In a recent book,* which is one of the most readable and imaginative contributions to this collection of works, Mr. Basil Ionides deals with the question of colour as it applies to interiors, giving one chapter to the consideration of each colour. He has much to say that is practical and useful, and his book will doubtless assist those whose taste is somewhat embryonic in avoiding pitfalls, but to the expert the coloured plates, excellently reproduced from paintings by Mr. W. B. E. Ranken, R.I., suggest that the examples chosen lack harmony and repose, and that indefinable yet unmistakable quality of personality.

The discussion of the effect of the reflections of ceiling, walls and floor on the colour scheme and the equally important matter of the variations which may be obtained (and the pitfalls to be avoided) by the use of coloured curtains and window coverings is instructive and provides much sound advice. One of the most useful chapters in the book is on "White," where the various possibilities of stippling—shading by coloured curtains and lights—are treated with imagination.

But, as the author himself would no doubt agree, the success of these schemes depends on experience and knowledge in their application. It may be for this reason that tabulated schemes of decoration are included for each colour, though (should this be so) one is by no means sure that the cure is not the more dangerous. And, in accepting and trying to make the best of things as they are, the author has shown us, with engaging frankness, how far we still have to travel before we return to the days when the aim of refinement and taste was to devise complete harmonies of interior decoration: when it was appreciated that, in such matters, a satisfactory result would generally be attained only through the employment of a skilled architect to direct and supervise, not only the erection of a building, but its completion in all details.

Most practising architects have, at one time or another, had clients who arrived with a collection of mutually incompatible cuttings from various publications which they wished to have "worked in" to the design for a house. These, though often good, are, perforce, too varied to make a good scheme. It is sometimes difficult to suggest that the client would be wiser to give the architect a freer hand and reserve his criticism and suggestions for a later stage.

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* "Colour and Interior Decoration," by Basil Ionides. Illustrated, with plates in colour by W. B. E. Ranken, R.I. 10s. 6d. net.

NOTES

The City Churches.

THE defeat of the City Churches Measure by an overwhelming majority constitutes a veritable triumph against the forces of commercialism. The House of Commons, in putting an end to the Measure, unquestionably voiced the opinion of the vast mass of the cultured public. It is surely one of the most hopeful signs in our modern civilisation that the public should be beginning to take our great monuments seriously. Waterloo Bridge has, so far, been saved from ill-considered demolition, and the Dublin Pillar is likewise safe until its removal to another site is considered as part of a comprehensive scheme. These reprieves, each the result of public pressure, could hardly have occurred thirty years ago, and it is to be hoped that officials, church dignitaries, and others in authority, will take these lessons to heart and treat our heritage of fine building with the respect that it deserves.

Public Bodies and Artistic Values.

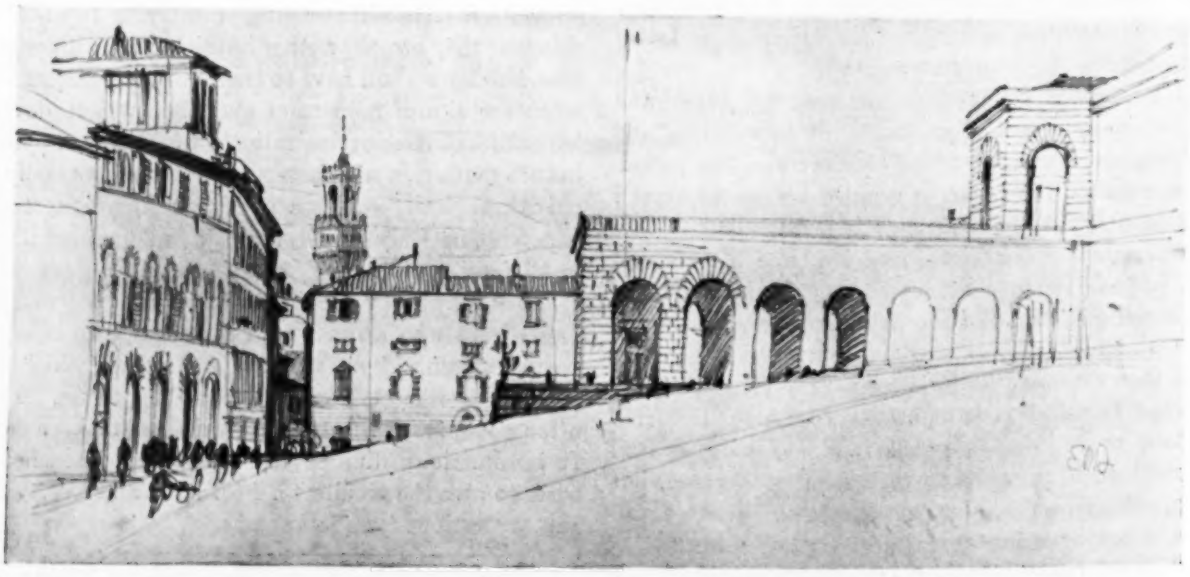
IN view of all that has been urged as to the obligation of town and village authorities to preserve the historic or beautiful examples of old architecture which they possess, it is little short of amazing that we have two cases before us in which for the sake of money or some fancied convenience, there are offered for sale valuable relics of old English art which ought to be preserved and retained, *i.e.*, at Barking and Bury St. Edmunds. The Elizabethan Market Hall at Barking was demolished some time ago, though £300 had been promised towards the £500 needed for its repair, and now an option has been granted for the purchase of its timbers. A finely carved old oaken house at Bury St. Edmunds has been demolished by order of the Corporation, and the best parts of it are now offered for sale. How are we to understand the point of view which enables public bodies to sacrifice these valuable records of the past for some gain which is, after all, rather trivial, or for convenience which possibly could be otherwise obtained? We must conclude that the rays of enlightenment which have now for some years been illuminating our dark vision are sometimes darkened by clouds of ignorance or indifference.

Entrance to Messrs. John Barker's New Store Building, High-street, Kensington.

SIR REGINALD BLOMFIELD, R.A., Architect for the Elevations.

The Foundling Estate.

WE are glad to learn that an Association has been formed, backed by very representative support, called "The Foundling Estate Protection Association," in order to organise public opinion against "the threatened destruction of the Hospital and Grounds, and the commercial exploitation of the Estate regardless of its historic interests, and the character and tradition of the Quarter." We have saved the City churches by a united and steady effort; ought it not to be possible to preserve the Foundling Hospital from a like intended destruction through the same united and public-spirited action? For the vacated site and adjacent property belonging to the estate having been sold to a commercial syndicate, whose publicly announced proposals if carried into effect will inevitably destroy the character of the whole district, can only be met by a similar effort, and the matter brooks no



Palazzo Pitti, Florence.

From a Pencil Sketch by MR. MAXWELL FRY.

delay. "Already plans have been prepared for the building of a market over the whole Hospital grounds, and for the cutting down of the trees in Mecklenburgh and Brunswick squares in order to form a parking ground for market carts." In the grave objections we feel to the destruction proposed in this case, we do not favour any general "die-hard" hostility to such changes as time and changed circumstances may sometimes require. But there is a limitation to all this and it does not permit us to mutilate what the ancient piety and public spirit of old time has bequeathed to us as inspiration and example. This is the case with the Foundling Hospital with its associations of two hundred years, its charming architectural features, and the sentiment distilled from it, which hallows its being and endows it with a claim to national preservation in which our own self-respect and citizenship are deeply concerned.

A Record of the Time. SUCH a landmark with its poignant and human associations must not be obliterated, for this is part of our wealth, and should remain as integral to the permanent nucleus of a great city, linking the ages together, and consecrating the patrimony of time. For, after all, such monuments are the best record of the life of the time we can have, and there is an example in them and an influence which to-day is of immeasurable importance. In such surroundings we may linger for a moment from the rush and exploitation of to-day, and feel the influence of these records of a time resting more on itself, and perhaps for that reason freer from our own restlessness. Religion and art are a name for the same experiences, and it may be that it was—though unspoken—the sense that religion suffered no less than art in the threatened destruction of the City churches that armed public opinion to a more static opposition, with what result we know. It is intrinsically the same with the Foundling Hospital wherein is enshrined the best worth of its own time, a heritage inspiring and tranquillising to our own more hectic experiences. Let us then set to work to save the Foundling Hospital from destruction, and in order to bring organised pressure to bear, every support should, we think, be given to "The Foundling Estate Protection Association," in which are associated many persons of distinguished record, who support its aims. Inquiries in regard to the Association should be addressed to the Hon. Sec., "The Foundling Estate Protection Association," 10, Mecklenburgh-square, W.C.1.

Architecture. THE PRINCE OF WALES has a happy knack of getting right to the root of a subject in the short space of an after-dinner speech. His remarks—that we cannot escape from architecture, be it good or bad; that an architect cannot build a town hall without a definite commission to do so; and that there is no point in starting to build unless there is a function to fulfil—embrace a complete philosophy of the position of architecture and the architect in the social state.

Beauty. AMIDST all our theories of beauty it has never been fully recognised that the material of which a thing is made often stands between the observer and the beauty of the design. To put it otherwise, a thing may have been considered beautiful until knowledge came to shatter the belief. Some years ago we remember reading an essay on "Beauty" in a newspaper. The details we have forgotten now, but we have a dim recollection that an artist promised to paint for his friends a view from a window overlooking an arm of the sea. In the distance, the red roofs of an old farm made a lovely spot of colour through the trees. The question was asked by the hostess why people used a common coloured tile when tiles of that "dinky" tint could be had. It produced the distressing reply from the artist that the roofs of the farm were covered with zinc, and that the salt breeze rusted zinc in a very short time. The red roofs glowed in the morning sunshine as before, but the spell was broken. On leaving, the artist said he would forward his sketch, but was told that they did not want a picture of tin sheds.

Architectural Criticism. IT is impossible to build up a theory of architectural criticism unless we are able to envisage both the problem and our social code. We take it, therefore, as a confirmation of the efforts of our contemporary, *Architecture*, to analyse a theory of architectural criticism, that every one of these points has been examined in detail. In the November issue of this journal is published a further contribution to the subject. There are those who see an analogy between architectural criticism and book reviewing. For them we have nothing but admiration, if they are prepared to accept "architectural book review criticism" similar to those examples submitted in the article referred to. It would require courage on the part of an architect to invite it; it would mean suicide for the obliging critic to attempt it. The subject is an inviting one, and Mr. J. Hembrow makes an interesting contribution to the discussion in the article which appears on p. 896.

Wrought-iron Well Head, Grand Hotel, Odense, Denmark.
MR. J. MÖLLER JENSEN, Architect.

GENERAL NEWS

New Bournemouth Theatre.

A site has been obtained in Bournemouth for the erection of the new Coliseum Theatre. Plans are being prepared by Messrs. H. E. Hawker & Partners, of Gervis-place. The cost of the building is estimated at £200,000.

The Old Custom House, Plymouth.

Through the intervention of Mr. A. Southcombe Parker, a Plymouth architect, the old Custom House, on the quay at Plymouth, which is to be converted into a motor garage, will have its most interesting features preserved. The Custom House dates back to about 1580.

Restoration of Santa Sophia.

Mr. Milton Medary, President of the American Institute of Architects, has announced that the executive committee has decided that whenever the international situation becomes favourable, it will approach the Turkish Government with proposals for the restoration of the fabric of Santa Sophia in Constantinople.

Licentiates and the Fellowship.

An examination of Licentiates desirous of qualifying for candidature as Fellows will take place on April 4, 5, 6, 7 and 8, 1927. Application forms, to be obtained at the Secretary's Office, R.I.B.A., must be sent in on or before Saturday, March 5, accompanied by the necessary drawings and photographs.

Tradescant Window at Oxford.

A memorial window to John Tradescant was unveiled last Friday on the stairs of the Old Ashmolean Museum at Oxford by Lord Fairfax, on behalf of the garden clubs of Virginia, who presented the window to the University. Tradescant, to house the contents of whose museum the Old Ashmolean was originally built, visited the colony of Virginia in 1637, and again in 1654.

Leathersellers' Hall.

Considerable reconstruction has taken place at the old hall of the Leathersellers' Company in St. Helen's-place, E.C.3. The old livery hall has been panelled in oak and enlarged by the addition of what was formerly a service room. There have also been constructed several new rooms, a court room, luncheon room, and a library, all of them panelled in oak, and in addition the entrance to the hall has been remade, and there is now a marble stairway and a wrought-iron gateway.

Mercantile Marine Memorial.

Owing to the decision of the Imperial War Graves Commission not to proceed with the scheme, the London County Council recommend that their resolution of May 18, 1926, relative to the grant of permission for the erection, on Victoria Embankment, of a monument to the men of the mercantile marine who were lost at sea through enemy action during the Great War, be rescinded.

Birkenhead Development.

The Estates and Development Committee of the Corporation propose that Messrs. T. H. Mawson & Sons should be retained to draw up plans for the lay-out and development of Arrowe Park and Royden Estates, which the Corporation has recently purchased. Arrowe Park has been bought mainly for park and cemetery purposes, while the latter is for housing areas and playing fields.

Town Planning in Rural Mid-Herts.

The Rural Councils of Hertford, Hitchin and Welwyn have decided to combine in an important town-planning scheme. The scheme will be known as "The Mid-Herts Joint Town-Planning Scheme," and the Committee "The Mid-Herts Joint Town-Planning Committee." It is recommended that the Joint Committee should consist of two members appointed by each Council, to hold office until April 15 in each year.

A Pict's House.

A Pict's house has been discovered on the farm of Rennisbister Firth, four miles from Kirkwall, Orkney. On examination an almost circular chamber was found measuring 11 ft. from east to west and 9 ft. from north to south; four stone pillars supported the roof. Five small recesses open out of the chamber, and a passage runs from it in a north-easterly direction.

It is understood that the Orkney Antiquarian Society are taking steps to have all the obstructions removed and the building properly protected.

Hadrian's Wall.

During the process of road improvements near Heddon-on-the-Wall, Northumberland, a portion of the Roman wall was discovered beneath the old roadway, and a remnant 50 yards long and 3 yards wide, has been removed, stone by stone. There are two walls of stone filled in by concrete, in which stone chips were mixed. Some of the stones in the wall weighed a quarter of a ton. Setts were to be put into the new road to indicate where the Roman wall had been. A portion of wall at Denton, near Newcastle, has been acquired by the corporation, and is being protected.

Architects' Benevolent Society.

The Architects' Benevolent Society Insurance Department has in preparation a special motor policy which it is hoped will prove of particular interest to architects, both from the point of view of the low premiums quoted and of the security offered. The Society is also elaborating a house-purchase scheme whereby architects will be assisted in the purchase of a house, provided it is for their own occupation, by means of a loan secured upon the house, with a policy of endowment assurance to provide for its repayment. Particulars will be available at an early date, and will be supplied on application to the Secretary, A.B.S., 9, Conduit-street, W.

Egyptian Tomb Discovery.

It is announced that the tomb discovered in 1925 by Professor Reisner, of the Boston-Harvard Mission, is that of the mother of Cheops, builder of the Great Pyramid, who was the Queen of Senefru, first King of the Fourth Dynasty. Professor Reisner has succeeded in reconstructing a number of objects and in deciphering inscriptions showing that the Queen's original tomb, near that of her husband, at Dahshur, was rifled by robbers, whereupon Cheops had the mummy removed to the very secret tomb near the Great Pyramid, which was afterwards his own mausoleum. It is hoped that the sarcophagus will be opened this month.

Foundling Hospital Estate: a Protest.

In view of the threatened destruction of the Foundling Hospital involved in the proposals of the Private Bill which, on completion of the purchase of the Foundling Hospital Estate by the Beecham Estates & Pills, Ltd., has been deposited for the new Parliamentary Session, Sir Johnston Forbes-Robertson (President of the Foundling Estate Protection Association) is convening a public meeting of protest to be held at Kingsway Hall, on Monday, December 6, at 8 p.m. The speakers are expected to include Lord Riddell, Hon. A.R.I.B.A. (President of the Royal Free Hospital); Professor Beresford Pite, F.R.I.B.A.; Sir James Remnant, M.P.; Professor Adshead, F.R.I.B.A.; Mrs. Cecil Chesterton; and Mr. D. S. MacColl.

London County Council Bill.

The London County Council give notice of their intention to apply to Parliament next year for leave to bring in a Bill for a number of purposes. These include the extinguishment of market rights and other franchises and rights appertaining to the Manor of Stepney and exercisable in reference to streets in Stepney; reconstruction of tramways in Stepney; extension of time for completion of certain street widenings and tramways and for the compulsory purchase of lands for the purposes of the London County Council (Lambeth Bridge) Act, 1924; powers to metropolitan borough councils of appropriating and using lands vested in them and to vary relative widths of carriageway and footway in the paving of new streets; and powers to L.C.C. and metropolitan borough councils to provide under the Housing Act, 1925, buildings adapted for commercial purposes.

COMPETITION NEWS

Ilford United Methodist Church.

The designs submitted by Messrs. George Baines & Son, FF.R.I.B.A., of 121, Victoria Street, Westminster, S.W. 1, have been placed first by the assessor in this competition, and the work is to be proceeded with as soon as possible. The estimated cost is about £1,200.

Victoria Hospital, Blackpool.

The following architects have been selected to take part in this competition: Messrs. Gibson & Gordon, London; Kenyon & Livock, London; Saxon Snell & Phillips, London; Lanchester, Lucas & Lodge, London; Thompson & Walford, London; Buckland & Haywood, Birmingham; Cackett & Burns-Dick, Newcastle; Rees & Holt, Liverpool; W. & T. R. Milburn, Sunderland; J. H. Morton, South Shields; Adshead, Topham & Adshead, Manchester; Waddington, Willoughby, Wade, Halstead Best, and Derham & Martin, of Blackpool. Designs have to be in by January 31.

Birmingham Civic Centre.

We have received a copy of the conditions of this competition, which is open to those qualified or practising as architects or town-planners. Questions must be addressed to the City Engineer on or before January 31. The conditions and the following plans and information will be forwarded to intending competitors on application, and on receipt of a deposit of £1 1s. paid to the City Engineer. This deposit will be returned after the award, or if the conditions, &c., are sent back within one month:—

A general plan of Birmingham, scale 3½ in. = 1 mile; a plan of the site to the scale of $\frac{1}{1200}$; aerial photograph of the site; photographs of Municipal Buildings, Hall of Memory, &c.; and declaration form to be filled in by the competitor, and envelope for same.

It is pointed out in the conditions that Birmingham has a population of about 1,000,000 and is regarded as the centre of the West Midland region of England, comprising six counties, with a total population of 3,000,000. The present civic buildings are not adequate to the demands on them, and it is desired to provide sites for additional ones so disposed as to enhance the dignity of the city. The area for which a scheme for development as a civic centre is desired is contained within the space of a circle having the Hall of Memory as a centre and with a radius of, approximately, 900 ft. Following is a schedule of public buildings which may be erected on the specified area: (1) Municipal Offices, covering about 40,000 super ft.; (2) City Hall (seating about 5,000), covering about 50,000 super ft.; (3) reserved for public offices, covering about 40,000 super ft.; (4) reserved for public library, covering about 40,000 super ft.; (5) reserved for Lord Mayor's Mansion House, covering about 6,000 super ft.; Natural History Museum, covering about 40,000 super ft.

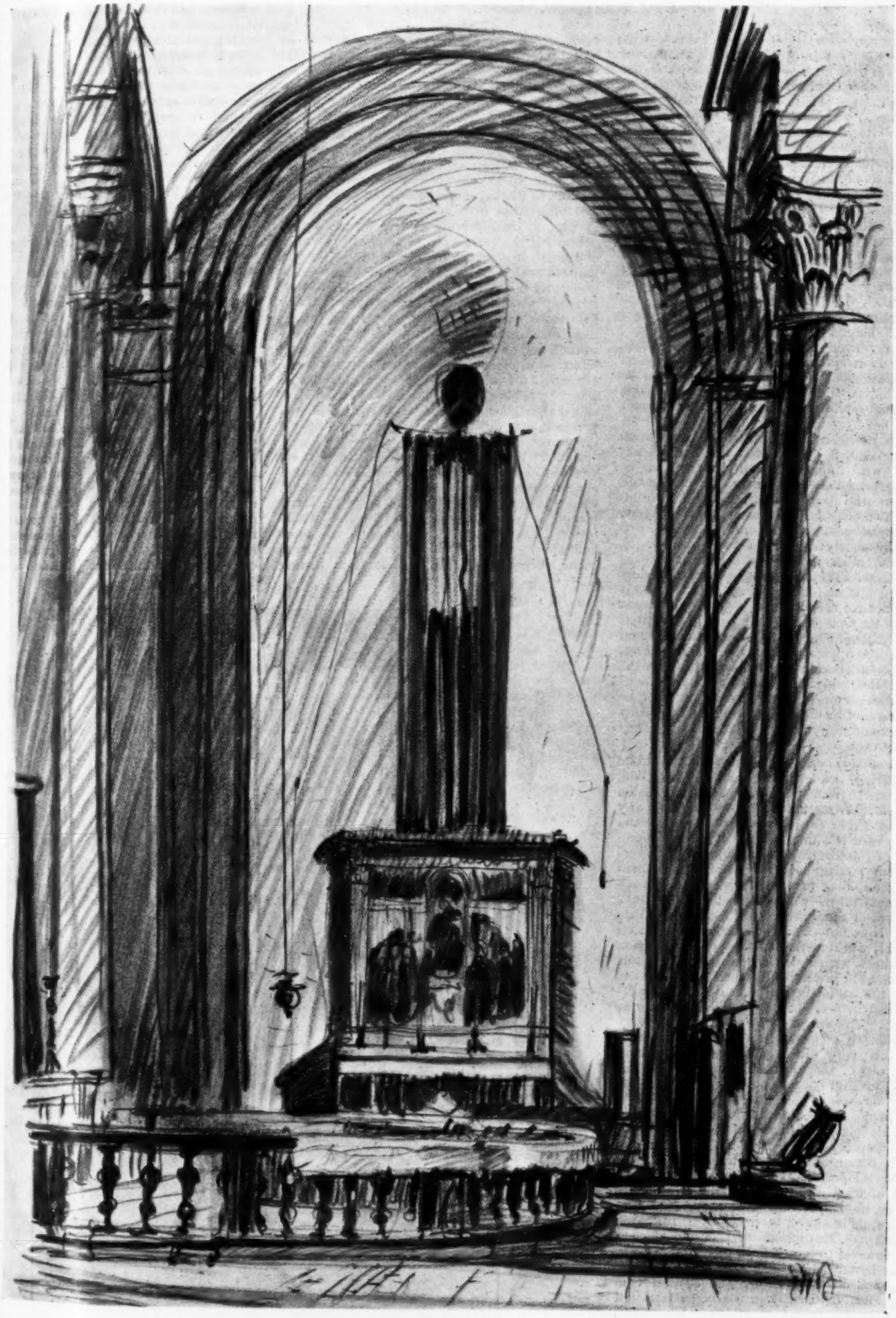
Other sites may be suggested, and, subject to this, the remainder of the ground should be allocated approximately, as follows:—

Roads and footways, 50 per cent.; business premises, 30 per cent.; and gardens, &c., 20 per cent. These proportions are entirely at the discretion of the competitor.

[There are no changes in the list of competitions open, and it is accordingly withheld this week.]

Research at Cambridge University.

The Vice-Chancellor of Cambridge University has published a communication received from the Committee of the Privy Council for Scientific and Industrial Research, stating that funds have been placed at their disposal by the Empire Marketing Board, which will enable them to offer a further grant not exceeding £25,000 to the University, for the building and equipping of an extension to the Low Temperature Research Station. Upon certain conditions set out in the letter, the University authorities are asked to state whether they will accept the offer.



Side Chapel, Santa Spirito, Florence.

(BRUNELLESCHI, Architect.)

From a Pencil Sketch by MR. MAXWELL FRY.

THE IMMACULATE ARCHITECT

By J. HEMBROW.

ARCHITECTS—at least, those of them who have by diligence and practice made themselves masters of their craft—are modest men. In the talking of shop in which some other professions—notably music—persist *ad nauseum*, their voices are practically never heard at all. Nor does one usually hear them claiming any special superiority over ordinary mortals or assuming immunity from common tribulations, but there appears to be an idea that they must not be commented upon by the vulgar, or criticised by their own professional contemporaries. It is suggested that these gentle-minded gentlemen—for such they are—object to seeing in print their nakedness laid bare. Especially, it is said, do they resent one of their own craft becoming critic for the moment. It seems to me to be doubtful.

Criticism is levelled customarily at other human beings. Artists, authors, actors, musicians, even inflatedly inviolable judges, bewigged and splendid, may have their views on law questioned. Does the architect wish to bask in immaculate ease as one upon whom this keen but salutary wind must never blow? Surely not!

The objection raised by others to critics, when any is raised, is usually that the critic is not always well informed. Can any person be better informed of the architect's difficulties and problems and the art of design than architects themselves? They can give, if anyone can, a just comment on current work. But some say—not architects, I hope—that living architects must not be criticised. They are immaculate. They must not be embarrassed by the opinion of the living (the only time when it could improve them, if ever); the living must wait till they die before they point out what is perfectly obvious to every informed person and ought to be appreciated by the general crowd. What useful effect can criticism have upon the dead? How can the public, who—hateful fact!—are much more important than we are, be educated or benefited or warned or advised by diatribes and dithyrambics on the dead? They are only concerned with the living!

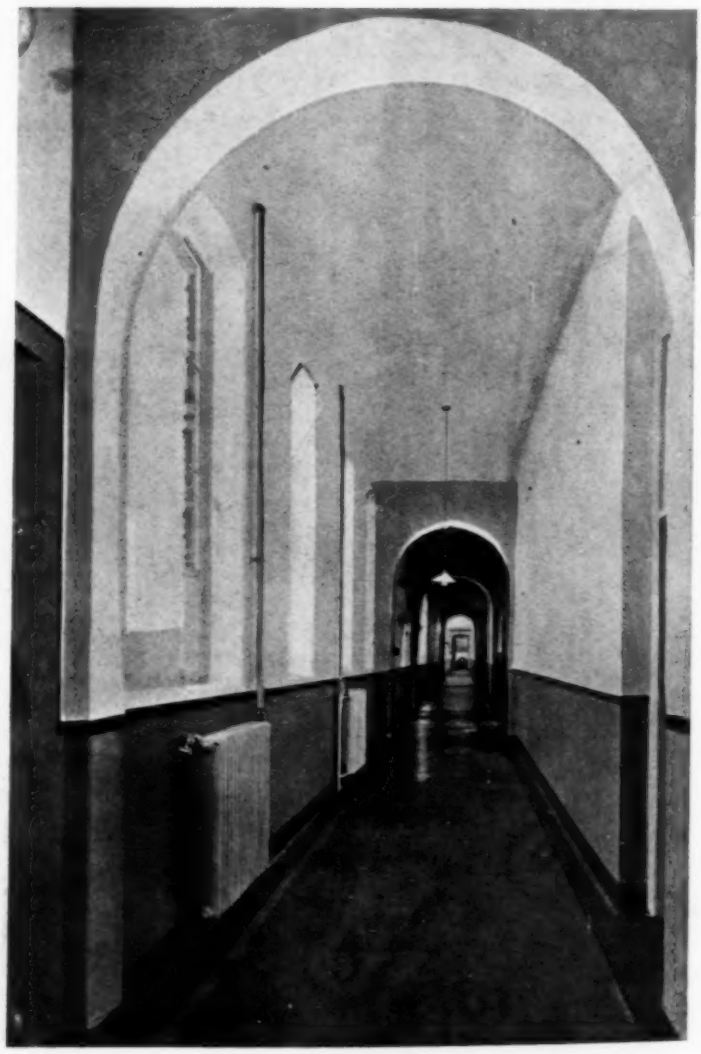
In these days both the architect and the public are suffering, not from criticism, but from lack of it; not from publicity, but unintended ostracism. Architects ought to welcome any help the Press can give their *art*, not *them*. Architecture is ailing because it is not appreciated or intelligently judged by the populace, not from malice but from sheer uninformed ignorance. Most men in the street only associate architecture with masses like St. Paul's Cathedral or some other vast isolated and rare work. Nine out of ten, on introduction to an architect, will remark that they have a relation an architect, who, however, is in a very important position, as he is a builder as well! They secretly regard the architect as parasitical and superfluous and are fleeced by a speculative builder as a result. The speculative builder knows very well what an architect is and does his best to keep this very inconvenient and inquisitive person out of the way, and as in the present state of general education the only time in life when a member of the general public has anything to do with building is when he buys or builds his house, his information on the subject of architects is perhaps, in the hackneyed phrase, "much better imagined than described." In sheer brutal fact, the public has only the haziest notion of what an architect really is, and has little or no respect for him in consequence. Architecture has never been part of his life as art or music has, and has never been of sufficient public interest to require him even to discuss it.

It is better to be slandered than ignored. Music, art, literature, law, are treated constantly and intelligently in the big dailies, but only at rare intervals is architecture dealt with, and then the architect is usually forgotten or mentioned in whatever space is left after the local tradesmen have filled all the columns with speeches which it has taken the reporter all his time to render into English. If a photo of the ceremony is given the architect can usually be found by searching between historically-intriguing types of headgear or umbrellas in an obscure corner where, by standing on tip-toe he has been able to get one eye in line with the camera.

In that peculiarly exclusive circle known as "the middle classes," or the "upper middle classes," it is necessary, if one is to be quite *de rigueur*, to have a good knowledge of, and to be able to discuss intelligently, the arts, crafts, and professions of which one reads in current events of interest—the calibre of a certain dramatist, the permanent or transient qualities of the latest aspirant to the mantle of the old masters, value or worthlessness of a new composer and his works—whether a certain author is really producing literature or only what is evanescent—the comparison of present prominent men in Europe with those of history—in such and all these things one must be as well informed as one's neighbour, or one is not quite educated. If such a standard of knowledge was required in architecture, or what is ironically called the Queen of the Arts, there is not one person in fifty but would be expelled as vulgarly ignorant.

This is the architect's fault. After all, no one can educate the public in architecture except the architect himself. When all is said the art taste of the world was made by the artist combined with intelligent literature, which fostered argument and controversy, the most healthy education of all. The architect, from some warped viewpoint, shrinks from having his work exposed to criticism. Storm and sun and rain and soot may beat upon it or defile it, and he rests in his bed unnoticed and content. But if he does not fear the elements, he fears opinion. He has an unspoken suspicion that fault could be found—mostly, he knows well it can, and he desn't want anyone else to know. On the very rare occasions when he looks upon his work and feels it is good, he is in terror of having the illusion destroyed. So he invents or seeks to continue a purely imaginary code of etiquette and immunity, and pretends to believe that he is such a rare bird that no specimen of his kind should be ever put in a metaphorical zoo for the thirsty curiosity of the public lest he die of horror amongst mere R.A.'s., Mus. Bac.'s, and prime ministers; and so great a horror has he of genuine criticism that recently it was seriously asked in the professional Press whether comments on the work of living architects should not be made only when they were eulogistic, and any analysis or censure barred. No other profession has produced anything so comic as this. Has the architect any claim to this specially gentle treatment by the world? He is probably the last of all artists who should escape criticism. The least to be excused for baulking it.

A bad book may be written—that is nothing, the paper can be used for many purposes; music is in big enough sheets to light the fire; pictures may be put in the attic and forgotten until they cease to offend or do harm, but a building badly done is a horror for generations. Each person who has to pass it at some time must look upon it. If the public knew as much of architecture as they do of art and music, one has hopes that a violent wave of incendiarism might occur with gratifying effect; one regrets sometimes the gentleness of the mob.



Stockton and Thornaby Hospital: Main Corridor.

MESSRS. LANCHESTER, LUCAS & LODGE, FF.R.I.B.A., Architects.

Criticism is of two kinds—good and constructive when it can be heeded with profit, or bad and useless when it can be ignored. Bad criticism, unlike bad building, does little harm—it kills itself; Keats and a hundred others lived to posterity, while their critics sank into oblivion at the grave. Furthermore, it rebounds on the critic with much greater force than it strikes its quarry. The greatest critics abstained to a surprising degree from "airing" their opinions. They placed the public in a position to judge—that is, they marshalled the facts very much on the constructive lines of a judge's summing-up, stated their own interpretation, and left it to the jury. Their function was to instruct, and no craft in existence is suffering so much from lack of such criticism and general instruction as architecture. The architect has surrounded himself with a reticence amounting to snobbishness—an attitude which would have killed any profession which had not to exist of necessity by its indispensability to the world. It exists now only because the world can't quite do without it, not because it loves it. The world in this country, so badly has the architect played his cards, regards him for all ordinary purposes as a costly indulgence, mainly distrusts him, and only employs him when compelled. He exists almost entirely by the wisdom and discernment of a minority of well-informed moneyed people and not as he should do as the vital creator of the environment of all.

This will not be remedied until vital public interest is created. While nine out of ten of the upper middle classes congratulate an "architect" on having sent in the lowest tender when he gets a job, there is not much hope of them ever showing a discriminating taste, and public interest will not be created by sulking in a sort of sham intellectual castle, and blaming other people because they can't see us.

If only the Press generally could review buildings as they do books and publish many readable essays and articles on architecture as they do on art, sculpture or music, we should perhaps hear occasionally an intelligent conversation among laymen. But this will never be while members of the profession pretend to be shocked at appearing in print. Until the Press give architecture its proper place, the present comic state of affairs will remain, and until architects take up their own pens (that they can do so is very evident if one runs through some well-known names in literature to-day), the Press cannot help. They won't train journalists to be architects, one may rest assured.

One has heard fierce denunciations of critics by persons in all walks of life. One has seen one's actor or actress friends toss aside with a gesture of pretended contempt some notice which has dared to point out that their reading of a certain part was not akin to genius, but did anyone ever know an actor or musician who did not cut out every favourable notice he could find? Did anyone ever know a musician without a Press-cutting book, or think for one moment that if it were not for the fact that it is made fashionable and is part of the equipment of the "right sort of people" (whoever they are) to go to Grand Opera or be well informed on the latest tenor or violinist or on music, a state of affairs mainly brought about by the Press, that as many people would go as do now? *Jamais en la vie.* The taste of those who do naturally like it would have remained very little trained and would normally have been more colloquial and probably largely without interest in the classics, and for the insincere it would not have been necessary to bother with it. When the taste of the upper middle classes is required to be as discriminating in the architecture of their homes and business premises as it is in music, when it becomes bad form to have a house with detail like public-house sentiment, architecture will come into its own, but that will not be while architects adopt a seemingly hypocritical and insincere attitude to the one thing likely to bring their art into familiar contact with the public. The architect *alone* can help the public. The Ruskins and Morrises have done enormous good, but, after all, with exceptions, they only touch the cultured classes which already, thank heaven! appreciate the architect. Unfortunately, too, the layman always contrives to be colossally wrong somewhere in a vital way—as witness the truly awful things done in the name of and under the influence of Ruskin. Carefully sweetened doses of sycophantic appreciation of great new buildings which are frequently drafted by little more than a printer's boy from bare facts elicited with difficulty from the contractors' office, are worse than useless. There should be some good, healthy, vigorous stuff calculated to make the general public "sit up" and take interest. Some day, in perhaps two more generations, others will reap the reward of our labours in this one—then an *architect* doubtless will really be an *architect*, and not as now anyone who has ever seen a "T" square, or smelt oxgall. Possibly there will be less need for the public to be educated then, but now the only hope of architecture is to place the public in a position to judge good from bad—they can't now, or hundreds of so-called architects would be heaving coal. Perhaps it is these who object to criticism and the enlightment of the public.

SOCIETIES AND INSTITUTIONS

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION.

A general meeting of the Hampshire and Isle of Wight Architectural Association was held at the Castle of Winchester on Monday, November 15, when there were present: Messrs. J. Arthur Smith, F.R.I.B.A., Vice-President (in the chair), F. Arnold, C. H. Aslin, W. F. Ball, E. Bird, S. J. Bryant, C. F. Carter, V. G. Cogswell, H. Collins, A. D. Colverson, R. G. Davis, W. H. Drover, E. H. M. Ebbs, Lieut.-Col. R. F. Gutteridge, F. Holyoak, C. C. Jackson, L. W. Jukes, P. Kent, E. T. Liddiatt, E. C. Lomer, P. E. Mitchell, E. G. S. Newman, G. Ramond, J. C. Richard, A. L. Roberts (Hon. Secretary and Treasurer), I. Sanders, A. E. Shervey, A. F. Smith, and J. Stevens.

Mr. Robert Bostock, B.A. Cantab. (in architecture), Sparsholt Manor, near Winchester, and Mr. Norman B. Hillier, Pinaster, West Hill, Winchester, were elected Associates.

The Hon. Secretary reported that the Council had, under Section IV, Rule 18, elected the following members to vacancies on the Council:—Fellows: Mr. J. H. Blizard, F.R.I.B.A.; Mr. V. G. Cogswell, A.R.I.B.A.; Mr. L. M. Field, L.R.I.B.A; Mr. W. T. Reynolds, and Mr. A. E. Shervey, F.R.I.B.A. Associates: Mr. S. A. Gulliford and Mr. C. C. Jackson.

It was further reported that the membership was steadily increasing, the total number of members now being over 130; that the Council had decided to publish a handbook next year giving full particulars of the Association and its work, and that the Draft Registration Bill received from the Institute had been considered, and the Council had decided to support it. After the Bill had been adopted by the Council of the Institute it would be submitted to its general body and the general bodies of its Allied Societies. An endeavour was being made to establish a Design Club in connection with the Architectural Association, and the Council were depending upon the associates giving the scheme their whole-hearted support. The Architects' and Builders' Consultation Board for Hampshire and the Isle of Wight had been established, and the first meeting of the Board had taken place; the Council believed that it would do most useful work.

Reference was made to the annual exhibition, which it was proposed to hold in Southampton from the 9th to the 16th of December. The students' R.I.B.A. prize drawings will be exhibited, together with drawings and photographs of buildings and architectural works by members of the Association. The exhibition will be open to the public.

The meeting was followed by a lecture by Mr. Harry W. Roberts on "Modern Methods of Design." The lecturer explained his discovery of a natural scale of form very similar to the scale of sound in music. The ordinary set squares universally used, he said, gave two of these forms; five others were added to complete the scale. Any set square used on a tee square immediately gave a height and width of a form which was agreeable to the eye, just as the tonic and another tone of the musical scale were harmonious and agreeable to the ear. From the recognised fact that parts of the human figure were related to each other and to the whole, and, again, in a musical composition the individual tones were in harmony with each other and with the tonic base, so a design founded on this scale of forms would have its several parts in good proportion to each other, and each of them related to the whole. This good proportion was arrived at very quickly without the prolonged consideration and reconsideration that attended the usual way of procedure. Set squares enormously simplified such subjects as practical geometry, conic sections, and trigonometry; again, the orders of architecture could easily be dealt with.

Lieut.-Colonel R. F. Gutteridge proposed a vote of thanks to the lecturer, which was seconded by Mr. Ingalton Sanders and carried.

BRISTOL SOCIETY OF ARCHITECTS.

Presidential Address.

Mr. C. F. W. Dening, R.W.A., F.R.I.B.A., dealt with the subject of "Modern Architectural Tendencies," in his inaugural address at the opening meeting of the session of this Society. The profession, he said, was too great to be treated merely as a commercial concern, but he could not be blind to the fact that a tide was flowing rapidly in that direction. For instance, great furnishing firms not only designed and executed interior decoration, but planned and erected buildings; the majority of shop fronts were designed by shop front specialists; nurserymen laid out gardens with all their architectural accessories; and a garage was thrown in with their car when they purchased one. It was time their profession, to say nothing of the public, was protected. In this age, values were judged by cost, and he had found it difficult to persuade a wealthy client that good colouring and design in a cheaper fabric was preferable to bad in a more costly one. He used to think that the introduction of a fine façade would in time leaven a whole street, but such was not the case, and many new fronts were inferior to the old ones they replaced. He hoped the inclusion of a clause in the Bristol Bill relative to the control of the design of new buildings would function in such a manner that the next half-century would not see a repetition of such anomalies as the last fifty years had witnessed. Clients might make all sorts of demands and lay down restrictions, but it was difficult to conceive that any demands were responsible for inferior and vulgar designs. Ill-proportion could not be compensated by carrying out the work in costly materials.

If the nation demanded really fine architecture to-day, then fine architecture would be forthcoming, and in the term architecture he embraced more than the building. When the purely commercial element had ceased to exist their art would rise to a higher level of consistency. The spirit of rivalry would never produce the charm and refinement so eloquently expressed in the eighteenth-century façades, when designers were content to express their individuality upon a minor feature, rather than distort a whole street by forcing their personality to extremes. They should view their work as a contribution to a whole, rather than as a whole.

The Roads Improvement Association.

The head offices of this Association have been transferred to 180, Clapham-road, London, S.W.9, to which address all communications should in future be sent. Telephone number: Brixton 5689; telegraphic address: Ruebilder, Claproad, London.

R.I.B.A.

London Architectural Medal.

A form of nomination in connection with the award of this Medal for 1926 has been issued by the R.I.B.A. The form has to be completed and sent in to Mr. Ian MacAlister, Secretary, R.I.B.A., not later than February 28, 1927.

Housing: Salary out of Loan Moneys.

The following note, drafted by the Practice Standing Committee of the R.I.B.A., has been approved by the Council for publication:—

An inquiry addressed to the Ministry of Health as to whether loans to local authorities for housing allow of the payment out of such loan for the services of their permanent staff when acting in the capacity of architect for a housing scheme, brought the following reply:—

"In reply to your letter of the 15th instant, I am directed by the Minister of Health to state that the following is the condition on which loans to local authorities are ordinarily sanctioned:—

> "'No part of the salary or wages of the Council's permanent staff (including employees), ordinarily charged to revenue account, should be defrayed out of moneys borrowed under this sanction. There would, however, be no objection to the payment out of the loan of reasonable remuneration for additional work performed outside normal hours, or, where it is necessary, temporarily, to employ substitutes to take the place of permanent staff during the time that the staff is engaged on the work for which the loan is sanctioned, a sum equal to the reasonable remuneration paid to the substitutes.'"

From this reply, it would seem that the payment of a local authority's surveyor and his permanent staff for services as architect to a housing scheme would in normal circumstances fall upon the rates, but that reasonable remuneration (usually by way of a bonus) for additional work performed outside normal hours, and the payment of temporary assistants, is allowable.

Members of the R.I.B.A. who are ratepayers in any district where housing schemes are proposed to be carried out by the local surveyor (sometimes it is even the inspector of nuisances), it is suggested might use this information to secure the appointment of a qualified independent architect without additional cost to the ratepayers. As a rule, a local surveyor and his staff have their time fully occupied in properly attending to their ordinary and statutory duties, making the appointment of temporary assistants necessary when further work such as housing is undertaken, and experience proves that these temporary appointments often become a permanent charge on the rates.

Professional Conduct and Practice.

On the recommendation of the Practice Standing Committee, the Council have revised Clause 3 of the "Suggestions Governing the Professional Conduct and Practice of Architects," to indicate more fully their attitude on the question of architects' names on notice boards. The attention of members is particularly called to the revised clause which is printed in the 1926-1927 *Kalendar*, and reads as follows:—

Clause 3.—An architect must not publicly advertise nor offer his services by means of circulars. He may, however, publish illustrations or descriptions of his work, and exhibit his name on buildings in course of execution, including those where he is acting as architect for alterations and additions, provided it is done in an unostentatious manner and the lettering of his name does not exceed 2 in. in height. With the client's approval, any such boards may remain for a period not exceeding two months after the completion of the building, provided they do not display "to let" or "for sale" or similar notices, but they may indicate that the plans can be seen at the architect's office. Architects who are surveyors to recognised estates may announce land or sites or premises for sale or letting in connection with their appointments or when they are acting as architects for the development of land or sites.

Amendment of By-law: Meeting.

The Third General Meeting (Business) of the Session 1926–27 was held on Monday last, November 29, to consider incidentally the Council's proposals for the amendment of By-law 29 with regard to the representation of the Allied Societies on the Council and to pass the following resolutions:—

(1) That By-law 29 (*c*) be amended as follows:

Twenty-two representatives of societies in alliance with the Royal Institute within the United Kingdom or the Irish Free State, distributed and selected as follows:—

(i) Six representatives from the Northern Province of England, which territory shall be deemed to include the Northern Architectural Association, the Manchester Society of Architects, the Liverpool Architectural Society, the York and East Yorkshire Architectural Society, the Leeds and West Yorkshire Architectural Society, and the Sheffield, South Yorkshire and District Society of Architects and Surveyors.

(ii) Five representatives from the Midland Province of England, which territory shall be deemed to include the Birmingham Architectural Association, the Leicester and Leicestershire Society of Architects, the Northamptonshire Association of Architects, the Nottingham and Derby Architectural Society, and the Norfolk and Norwich Association of Architects.

(iii) Four representatives from the Southern Province of England, which territory shall be deemed to include the Devon and Cornwall Architectural Society, the Wessex Society of Architects, the Berks, Bucks and Oxon Architectural Association, and the Hampshire and Isle of Wight Architectural Association.

(iv) Four representatives of Allied Societies in Scotland nominated by the Council of the Incorporation of Architects in Scotland.

(v) One representative of Allied Societies in Wales, nominated by the Council of the South Wales Institute of Architects.

(vi) Two representatives of Allied Societies in Ireland nominated respectively by the Councils of the Royal Institute of the Architects of Ireland and the Ulster Society of Architects.

Every such representative of an Allied Society must be a Fellow of the Royal Institute, and must be either the President of the Society which he represents, or, in the event of the President's inability to act, a Member of the Council of such Society.

(2) That the necessary steps be taken to obtain the sanction of the Privy Council to such amendment to By-law 29 as is required to give effect to this resolution.

Other business followed:—

SCALE OF PROFESSIONAL CHARGES.

To consider the recommendations of the Council that Clause (F) of the Conditions of Engagement, which form part of the Scale of Charges, should be revised as follows:—

(F) In all cases where special construction or equipment is necessary, a Consultant or Consultants may be required. His or their selection shall be at the architect's discretion, in consultation with the client. The fees of such Consultants or Specialists are not included in the architect's percentage charges.

A number of new members were elected, whose names will be given in our next issue.

FOLLOWING are notes from the minutes of the Council for November 15:—

International Exhibition of Architectural Drawings, Melbourne.—The Council accepted an invitation to send an Exhibition of British Architectural Drawings to the Exhibition at Melbourne in May, 1927.

Ethics of Architectural Practice.—On the recommendation of the Practice Standing Committee the Council suggested to the Board of Architectural Education that more consideration should be given to the instruction of architectural students in the ethics of practice of the profession.

Competition for the League of Nations Building.—The Council signed a petition promoted by the Boards of the Maatschappy tot Bevordering der Bouwkunst, Bond van Nederlandsche Architecten, B.N.A. (Company for Promoting the Architectural Art), and the "Genootschap Architecture et Amicitia" (Society Architectura et Amicitia) at Amsterdam, in favour of an extension of the time limit for sending in designs.

Glastonbury Abbey.—The Council approved a request from Dr. Arthur Bulleid, of the Glastonbury Antiquarian Society, to obtain signatures for petitions to the Archbishop of Canterbury and the Urban District Council of Glastonbury in connection with the proposed purchase by the Glastonbury U.D.C. of the piece of land in front of the Abbot's Kitchen for the purposes of a motor park. The petitions were available at the R.I.B.A. for signature by members and others interested until Monday, November 29.

The Architects' Benevolent Society.—A grant of £100 was made to this Society for the year 1926.

The Architects' Defence Union.—A loan of £100 was made to this body for the purpose of propaganda and advertising.

Town Planning.—The Council received a report on the International Housing and Town-Planning Congress, Vienna, from Mr. E. C. P. Monson, who went to Vienna as the delegate of the R.I.B.A.

The Universal Society of the Theatre.—Mr. Herbert A. Welch, F.R.I.B.A., was appointed R.I.B.A. representative on the Executive Committee of the General English Committee of this Society.

Honorary Corresponding Membership.—The Council decided to nominate Professor Fritz Schumacher, City Architect of Hamburg, for the Hon. Corresponding Membership.

Studentship.—The following Probationers were elected as Students: Leonard John Batton, Richmond, Surrey (Cambridge Univ.); Kathleen Orrey Brayshaw, Huddersfield (Manchester Univ.); John Breakwell, Hampstead (Architectural Assoc.); Arthur Calvaley Cotton, Birkenhead (Liverpool Univ.); Morris De Metz, London, W.1 (Northern Polytechnic); John Gairns Laskie, Bearsden, near Glasgow (Glasgow School of Architecture); Owain Gwynedd Lewis, Portmadoc, North Wales (Liverpool Univ.); Alfred Ian Duncan Macdonald, Roseneath, Troon, N.B. (Glasgow School of Architecture); Kenneth Ronald Mackenzie, Liverpool (Liverpool Univ.); Frederick Napolitano, London, W.C.1 (Architectural Assoc.); Edward Brian O'Rorke, Chelsea, S.W. (Architectural Assoc.); Alec Owen, Wallasey, Cheshire (Liverpool Univ.); Constance Winifred Preston, London, W.8 (Architectural Assoc.); Arthur John Rea, Balsall Common, near Coventry (Birmingham School of Architecture); James Frederick Leopold de Silva, c/o Messrs. Richardson & Co., London, S.W. (London Univ.); Leonard Rowland Stedman, London, S.W.5 (Univ. of London); Harry Braithwaite Stout, Whitehaven (Liverpool Univ.); Frank Orr Templeton, Glasgow, N.W. (Glasgow School of Architecture); William Grant Weir, Glasgow, W.2 (Glasgow School of Architecture); James Fenton Wyness, Aberdeen (Robert Gordon's Colleges, Aberdeen).

Statutory Examinations.

At the last Statutory Examination for District Surveyors and the Examination for Building Surveyors under Local Authorities, ten candidates presented themselves, and it is thought that attention should be called to these examinations as being well worth the consideration of students of architecture. The subjects included in the examinations are all of direct practical interest to architects, and a sound knowledge of them is indispensable to those who wish to practise good architecture, so that not only those who propose applying for appointments either as district surveyors or building surveyors benefit from having passed the examinations, but students who want to have guidance in their studies also benefit.

The study of the Metropolitan Building Acts is of value not only to the Metropolitan architect but also to those who practise in the provinces and occasionally do work under the London District Surveyors.

The next examinations will be held on October 19, 20 and 21, 1927, and the closing date for applications is October 3. Full particulars can be obtained on application to the Secretary, R.I.B.A., 9, Conduit-street, W.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Statutory Registration of Architects.

SIR,—The schedule of historical facts set forth by Mr. Butler is interesting and quite new to me, but it is no answer to my oft-repeated inquiry. As he invites me to help the S.R.A. Committee in their difficult task, I will endeavour to draw their attention to some elementary facts and principles that I fear have got overlooked. I must begin at the beginning.

We are doubtless agreed that buildings are of the utmost importance to every member of the community; that bad ones, unlike bad books or pictures or music, cannot be hidden away—it is their nature to be permanent and prominent, and to inflict themselves on generations to come. It is of the utmost importance that those entrusted with the design and erection of buildings should be fully and carefully trained, and the fact ascertained before they are allowed to practise.

Agreed so far; I think we now part company. I hold that the principle should apply to every building in the land, whether designed by architect, engineer, surveyor, builder or any nondescript person. To apply it to architects only is illogical. Doubtless we shall agree when I say that the distinction between "architecture" and "building" is not that of adding frills to a commonplace, utilitarian structure; it is something inherent in the design; it may lie in the actual plan as much as anywhere. Architecture does not lie in a "fake" to make a new building look like an old one, or in trying to make stucco look like stone or floorboards applied to a wall to look like timber framing. We shall agree that there are modern methods and modern materials and modern requirements that have to be met and that there is no reason why modern design based on these should not be beautiful, unless we have become incompetent. We shall disagree when I suggest that half the ugly work is done by those who call themselves architects, and I must look out for trouble when I suggest that by their own figures three-quarters of the members of the Institute are doing the ugly work. Whether it is that their clients will not let them do anything else, or whether the handicap is of another nature, I should not like to venture an opinion.

A point some of my friends are inclined to overlook is that S.R.A. means that the registration of some or all of building designers is part of the law of the land, and its interpretation as law will lie with the High Court judges, and it will be their view (and not that of a Committee at Conduit-street) that will decide in the long run who is to be on the list and who excluded. If "artist ability" is to be part of the qualification, the Law Courts are hardly the best place for a decision.

Let us pass now to certain statements recently made and collected (for another purpose) on page 543 of the *Builder* of April 2 last. We read (in effect) "that 90 per cent. of modern building has no architect," that "there are 8,000 who claim to be architects"; "only a few are worthy of the title"; elsewhere we are told "the majority of architects want S.R.A."; "that members of the R.I.B.A. and their allies number 5,000"; "that the profession is overcrowded." Made in the best of good faith, these statements are mutually contradictory, some of them obviously impossible, and others unlikely. Evidently different meanings are attached to the same word by different speakers. Again, to begin at the beginning. Statistics are difficult to find and must be inferred from other information. Under the National Insurance scheme some 15,300,000 persons are insured; of these nearly 8 per cent. are engaged in building. That gives us 1,200,000 workers. The figures appear to represent those who are paid their wages by "builders and contractors," other labours such as electric wiring, hot-water heating installation and, perhaps, structural steel framing work not usually paid for direct by the builder are presumably not included in the 1,200,000. On the other hand, we must certainly deduct those constantly engaged in the repair and maintenance of existing buildings. Adding the one and deducting the other, it is probably near enough for present purposes to say there are a million engaged in erecting new work. Wages for these may be £140 million, and another £140 million must be added for the material they use and the fittings they fix, and we further add the several insurances, overhead costs and profits.

This gives us a total volume of new building of £300,000,000 to £350,000,000 a year. Making allowance for petty matters and rough calculation we have perhaps a round £300 million of new building, all of which requires plans, calculations, estimates and supervision.

It is of the utmost importance to the entire community that the whole of the £300 million should be erected from the designs of properly trained advisers; that one section—large or small—should come under S.R.A. and not the whole is illogical and unworkable. And I fear it is one section only that is contemplated by architects.

It can now be shown that the statement that architects do only 10 per cent. of the total volume is very wide of the mark. The scale charges on £30 million would only provide about £5 a week for each member of the Institute. Divided among the 8,000 who claim to be architects it would be less than £150 a year.

Again, if we assume each designer makes a net £1,000 a year, then there will be 12,000 designers (and perhaps somewhat more). If the 8,000 "architects" are as efficient as the others, then they do 66 per cent. of the work and not only 10 per cent. If it is true that "architects" do only 10 per cent. of the total there should be only about 1,200 of them. In other words, of the R.I.B.A. alone three-fourths of the members are doing work of a quality that cannot be distinguished from outsiders.

With these figures before me I have much sympathy with Mr. McArthur Butler and his Committee in what he terms "their difficult task." It appears to me to be an impossible and needless one since there is another easier and better way. All competent architects should be members of the Institute. Many are not. There must be a reason, and that reason should be removed. I have no authority to speak for others, but I suspect that a little change in the constitution and a very little change in the policy would achieve just what I imagine S.R.A. is hoped to accomplish—at all events in the rising generation if not in the past generation—and after all it is the future architects and not those in the middle or end of their career whom it is important to legislate for.

To go into these suggested changes would be to extend this letter beyond all reasonable limits, but I am quite ready to set them out if there is likely to be any interest in the matter.

HORACE R. APPELBEE

Limited Competitions.

SIR,—At the present time yet another architectural competition is being advertised in the technical Press as limited to architects in practice; this is much to be deplored. I heartily agree with the policy of the Association of Architects, Surveyors and Technical Assistants regarding the question of these limited competitions.

Owing to the present state of overcrowding in the profession, it is becoming increasingly difficult for an assistant to set up in practice on his own, and in the majority of cases he has not the necessary capital to do so, and has to rely upon winning a public competition to obtain a start. In addition to this, the talent of the future has always to come from to-day's assistants, and if competitions are continually to be limited to architects in private practice, assistants will have no way to show their ability.

I feel strongly that the R.I.B.A. have ample justification for taking a decided line regarding the matter, and making it one of their model rules of competitions that they must be open to all members of the profession. If this cannot be arranged, promoters should state their reasons why it is impossible or undesirable.

MEMBER OF A.A.S.T.A.

Vandalism.

SIR,—As a protestor in your columns against the destruction of the City churches, I hail the verdict with delight. It is, however, against vandalism of a different order that I am now writing. The hoardings have not yet been removed from the site in Endsleigh-gardens, where another quasi-religious order has occupied one of London's priceless open spaces, or lungs.

In another instance, that of Mornington-crescent, paragraphs in the Press announce that operations are about to be commenced for the rearing of an immense factory, whilst the site of the Foundling Hospital and environment hangs in the balance.

In the neighbourhood of Waterloo Bridge, whilst the whole question of improvement is in the flux, a substantial building has recently been completed on a site affected by the recommendations of the Royal Commission on London Traffic, whose findings have not yet been dealt with by any body adequate for the purpose.

These and other instances—the bridges and river, for example, as also the City and the whole question of Traffic—call indeed for the reconstitution of the original body to bring the work up to date.

O. B. I. T.

Quantity Surveyors' Fees.

SIR,—With reference to the note under this head appearing in your last issue I am pleased to note that the R.I.B.A. has taken some action in regard to certain members participating in quantity surveyors' fees. It is the experience of many quantity surveyors to-day that to obtain commissions they must sacrifice a large proportion of their fees to the architect engaging them. By circularising its members warning them against such a practice, I think the Surveyors' Institution would assist in putting an end to such transactions, which are far too prevalent.

Q. S.

MEETINGS

SATURDAY, *December* 4.

London Association of Builders' Foremen and Clerks of Works.—Annual Dinner. At the Hotel Cecil, Strand. W.C.2. 6.30 p.m.

MONDAY, *December* 6.

Royal Institute of British Architects.—Mr. A. H. Smith, President of the Society for the Promotion of Hellenic Studies, on "The Building Inscriptions of the Acropolis of Athens." 8 p.m.

Surveyors' Institution.—Mr. T. W. Whitfield on "Land Drainage." At 8 p.m.

Association of Architects', Surveyors' and Technical Assistants. (Midland Counties Branch).—Mr. C. B. Parkes on "The Electric Lighting and Heating of Buildings." At 2, Birmingham Chamber of Commerce, Birmingham. 7.30 p.m.

TUESDAY, *December* 7.

Royal Institute of British Architects.—The Council for the Preservation of Rural England (or "C.P.R.E.," as it is to be called) will hold its first meeting. At 3.30 p.m.

The Institution of Electrical Engineers.—Mr. R. B. Mitchell on "Home Lighting." At the Royal Technical College, Glasgow. 7.30 p.m.

College of Estate Management.—Mr. F. Howkins on "Development of Building Estates." At 35, Lincoln's Inn Fields, W.C.2. 5.30 p.m.

WEDNESDAY, *December* 8.

Edinburgh Architectural Association.—Mr. J. Stewart on "Recent School Planning." 8 p.m.

London Master Builders' Association.—Annual Dinner. At Hotel Victoria, W.C.2. 7 p.m.

THURSDAY, *December* 9.

Society of Antiquaries.—Sir A. Evans on "The Progress of Reconstruction in the Palace and Town-houses at Knossos." 8.30 p.m.

Architectural Assocn.—Conversazione. 8 p.m.

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ILLUSTRATIONS

Stockton and Thornaby Hospital.

This hospital has passed through three phases. When first built it comprised a small administrative block in the centre, with two ward blocks running east and west at either end. Subsequently a new ward block running southward was erected from the designs of Mr. Charles Henman and the east block was sub-divided. Various minor additions were made, but with the growth of the two towns the accommodation again became inadequate, and reconstruction was decided on. Fortunately the original site was sufficient in area to allow of the further extensions required, which take the form of new wards on its western portion, and a new nurses' home and an out-patients' department towards the road frontage on the east. The nurses' home is a self-contained block standing back on the centre of the frontage, and the out-patients' department comes forward at the north-east corner. Behind the nurses' home is the old building now accommodating the administrative departments, which have been extended westward to connect up with the new wards to the south of the main corridor.

The plan reproduced in this issue shows the extensions and the additional buildings which comprise the out-patients' department, in which the consulting rooms, etc., are arranged around a central hall. The V.D. accommodation is placed in a separate building to the west of this. The nurses' home contains recreation and sitting rooms for the nursing staff, with thirty-seven bedrooms and a sick bay.

The ward blocks, as indicated on the plan, are two stories in height. The smaller block is allocated to children and is divided into two halves, the southern end, for open-air treatment, having a very large window area, the whole of which is made to open. The operating theatre was enlarged and made to meet modern requirements. At the extreme west of the site the northern wing accommodates the new orthopædic department, while to the south are placed the large new surgical wards. The scheme includes the enlargement and re-equipment of the laundry on the north part of the site, a new mortuary and a servants' block.

The general contractors were Messrs. Arthur McLeod & Co., Thornaby-on-Tees, and the following were sub-contractors:—J. P. White & Co. (The Pyghtle Works), Bedford, door; Kleine Patent Fire resisting Flooring Syndicate, Ltd., floors; Crittall Manufacturing Co., Ltd., windows; Pickersgill & Son, Stockton, heating and ventilating; Art Pavements and Decorations, Ltd., paving and dadoes; Adamsez, Ltd., sanitary fittings; Roberts Adlard & Co., tiling; Bratt, Colbran & Co., stoves.

The architects are Messrs. Lanchester, Lucas & Lodge, FF.R.I.B.A.

New Store Building, Kensington High-street.

This new store building for Messrs. John Barker & Co., Ltd., which was recently opened to the public, stands on a site roughly 157 ft. by 146 ft., with an extension at the north-west corner 92 ft. by 40 ft. There are eight floors, the lowest of which is 31 ft. below pavement level. This floor is given over to the plant required for heating, ventilating, vacuum and sprinkler installations and electric lighting. The heating and ventilating is by the panel heating and plenum systems.

Three subways connect the basement floor to the older buildings. The floors are served by six passenger lifts and three goods lifts, all operated by hydraulic power.

A feature of the ground floor is an arcade, which runs the whole length of the High-street frontage. The walls of the public staircases from basement to mezzanine floors are lined with Botticino marble with black Belgian granite wall-strings and skirtings. Botticino marble is also used for the lift fronts on the basement, ground, and mezzanine floors. The ground floor treatment incorporates the mezzanine floor surrounding a well 75 ft. square.

Portland stone and black Belgian granite are used for the elevations, which were designed by Sir Reginald Blomfield, R.A. Mr. H. L. Cabuche, O.B.E., F.R.I.B.A., architect to the company, was responsible for the whole of the structure and interior treatment, including the arcade and shop fronts.

The sculpture on the High-street elevation is the work of the late Mr. Derwent Wood, R.A. Models for the bronze groups over the side entrances, grilles for ventilation shafts, the special electric light fittings over the mezzanine well, and the surround to the clock in the main entrance, were prepared by Mr. Walter Gilbert, sculptor.

The reinforced concrete work to the foundations, retaining walls, subways, staircases and tower was designed by the Considère Construction Co.

Following is a list of sub-contractors engaged on the work:—F. J. Barnes, Ltd., Portland stonework; Anselm Odling & Sons, Ltd., Belgian granite; H. J. Jenkins & Sons, Ltd., marblework and travertine flooring; V. Martorell, stone carving and models; Diespeker & Co., Ltd., terrazzo work; John Williams & Co., Westmorland slates; A. D. Dawnay & Sons, Ltd., structural steelwork; Kleine Patent Fire-resisting Flooring Syndicate, Ltd., fire-resisting floors; H. Hope & Sons, Ltd., steel casements and skylights; S. Haskins Bros., Ltd., shop fronts, arcade, ornamental bronzework; F. Sage & Co., Ltd., interior showcases on stairs; H. H. Martyn & Co., Ltd., decorative plasterwork; William Morris & Co., laylights; Metropolitan Vickers Electrical Co., Ltd., electric light fittings, arcade and ground floor; General Electric Co., Ltd., electric light fittings; The Birmingham Guild, balustrading for public staircases and mezzanine well; Vitrolite Construction Co., Ltd. (Europe), public lavatory wall finishings; Taylor Bros. (Sheffield), shopfitting; G. Parnall & Co., shopfitting, basement and fourth floor; A. L. Gibson, steel shutters; Sauvée & Co., Ltd., chute; Self-Sentering Expanded Metal Co., Ltd., suspended ceilings; Vigilant Sprinklers, Ltd., sprinkler installation; Grierson Ltd., electric light installation; J. Jeffreys & Co., heating and ventilation; Dod Bros., vacuum installation; Shanks & Co., Ltd., and Doulton & Co., Ltd., sanitary fittings; A. & P. Steven, Ltd., lifts; Bridgewater Construction Co., Ltd., stockrooms sub-basement; Synchronome Co., Ltd., clocks.

Stockton and Thornaby Hospital: Staircase.

MESSRS. LANCHESTER, LUCAS & LODGE, FF.R.I.B.A., Architects.

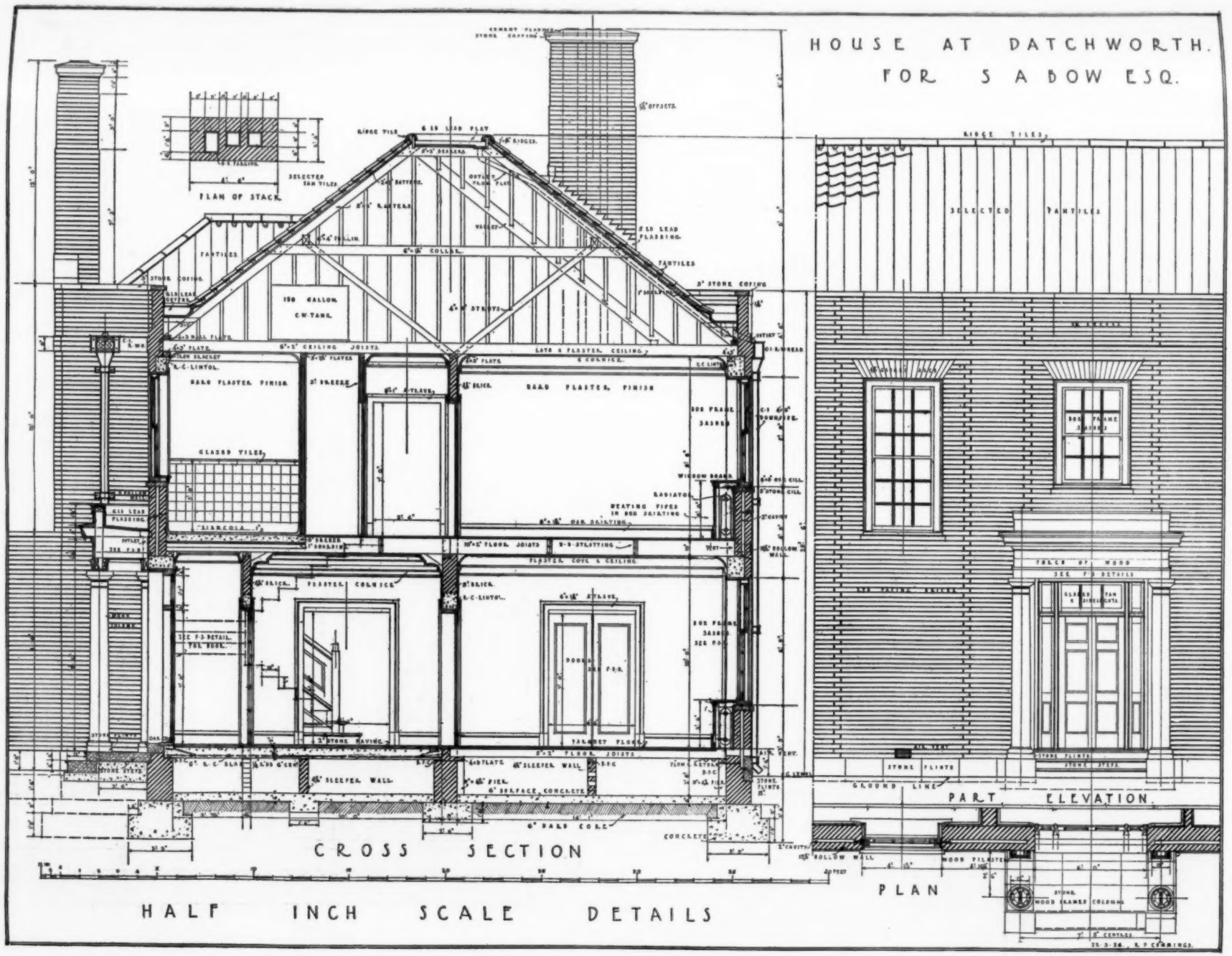
R.I.B.A. Archibald Dawnay Scholarships.

This year all the R.I.B.A. Archibald Dawnay scholarships available have been awarded to students of the Architectural Association, testimony to the high standard which is being attained in the school in the study and delineation of construction and practical detail.

The successful students are as follows:—

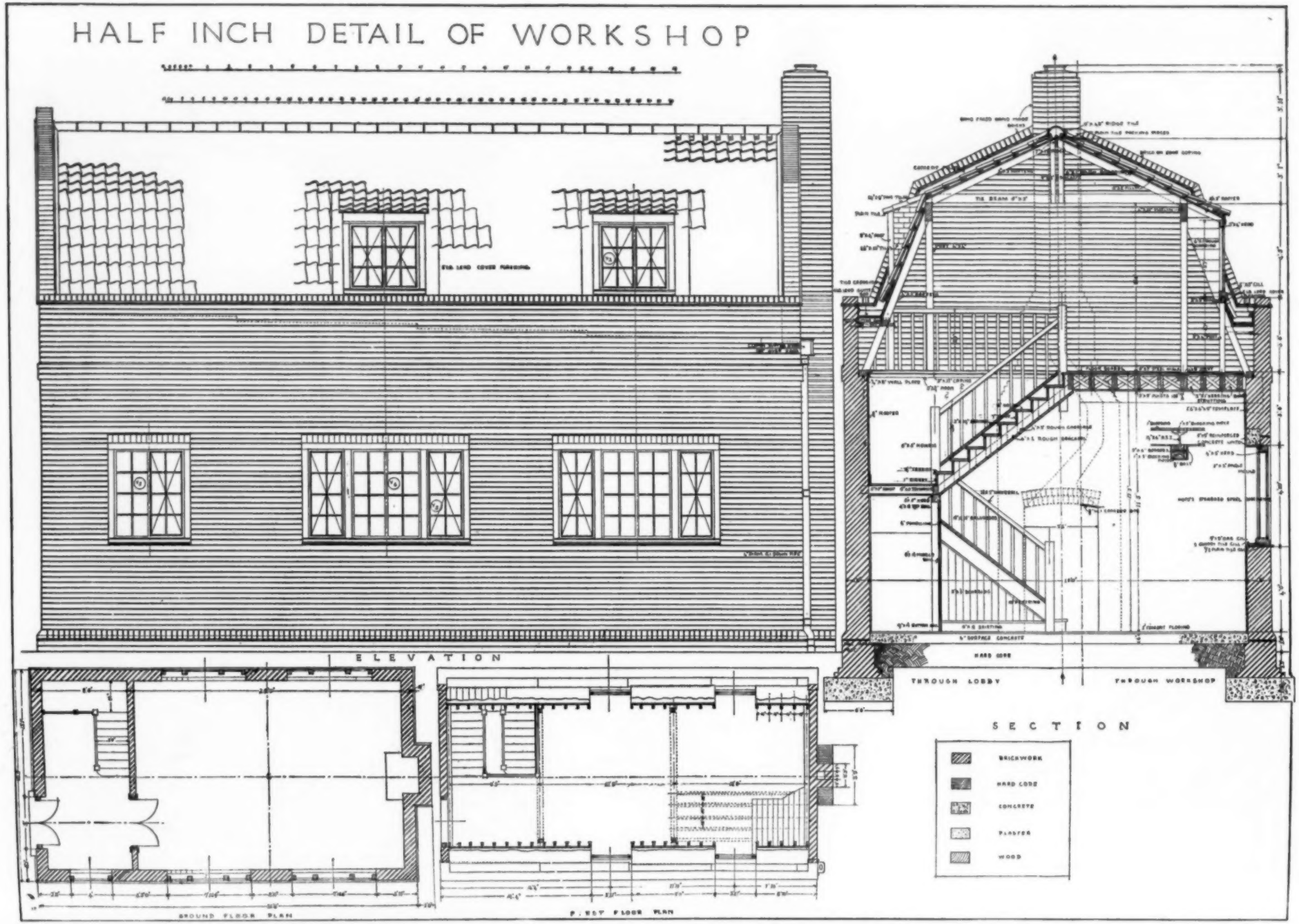
1. R.I.B.A. Archibald Dawnay Scholarship of £75 for one year, Miss C. W. Preston.
2. R.I.B.A. Archibald Dawnay Scholarship of £50 for one year, Mr. E. B. O'Rorke.
3. R.I.B.A. Archibald Dawnay Scholarship of £50 renewed for 2nd year, Mr. W. R. Brinton.
4. R.I.B.A. Archibald Dawnay Special 2nd Year Scholarship of £75, Mr. R. P. Cummings.

The drawings illustrated are working drawings which form part of the general school course.

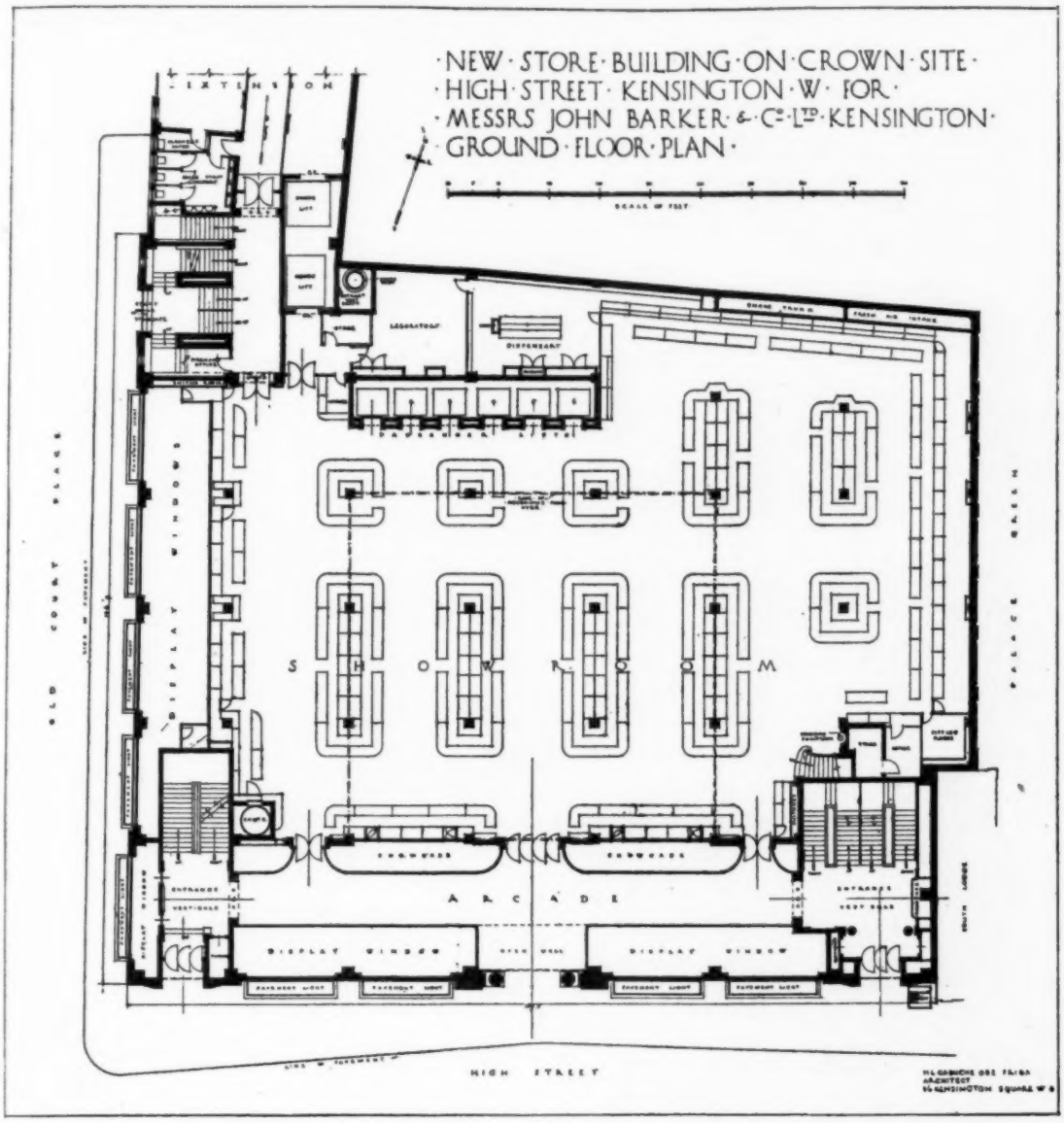


R.I.B.A. Archibald Dawnay Scholarship: Working Drawing of Design for a Residence.

By Mr. R. P. Cummings (Architectural Association). (*See also* Inset Plate.)



R.I.B.A. Archibald Dawnay Scholarship: Working Drawing of Design for a Workshop. By Miss C. W. Preston (Architectural Association).



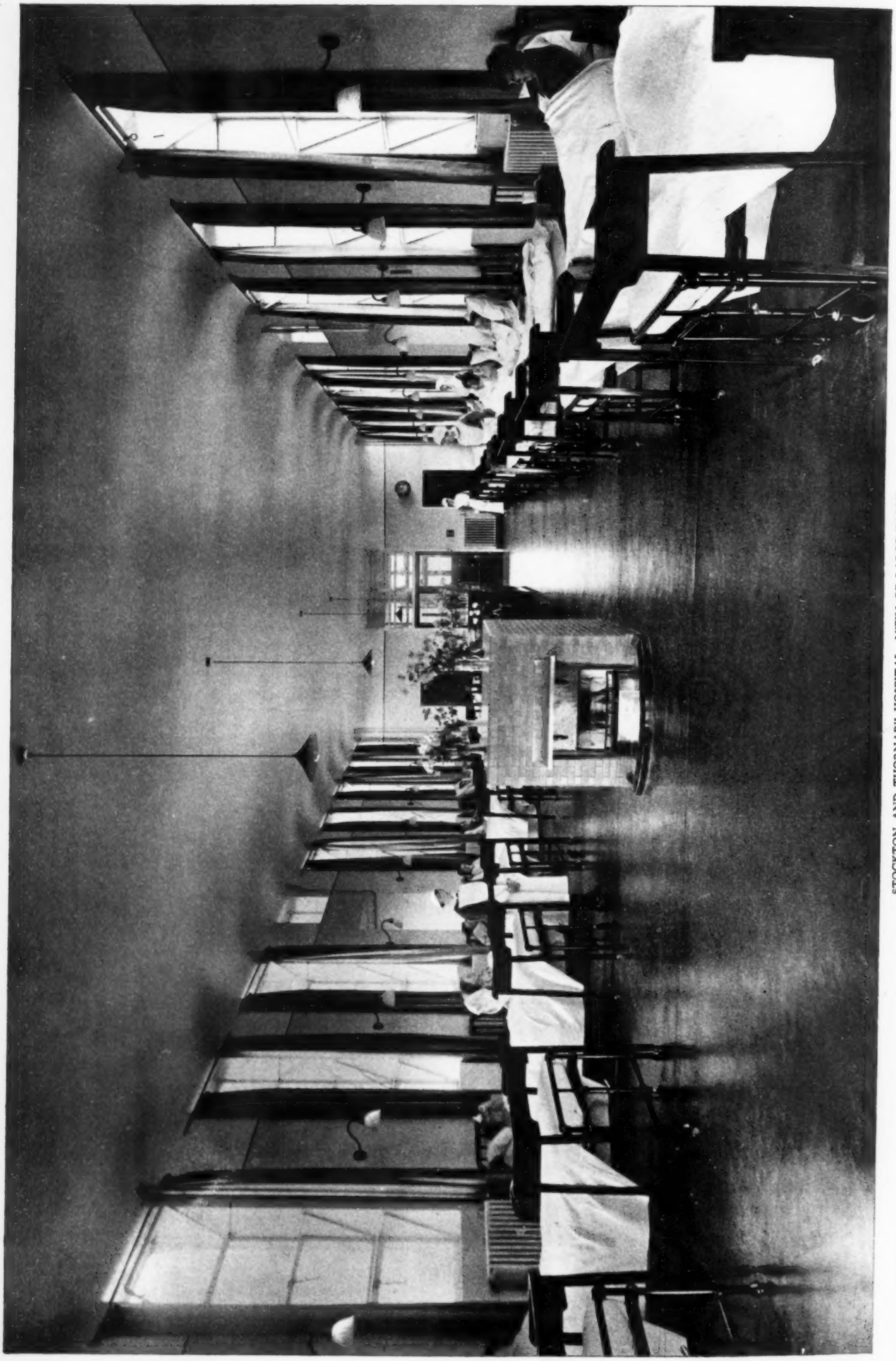
New Store Building for Messrs. John Barker & Co., Ltd., High-street, Kensington.

MR. H. L. CABUCHE, O.B.E., F.R.I.B.A., Architect to the Company.

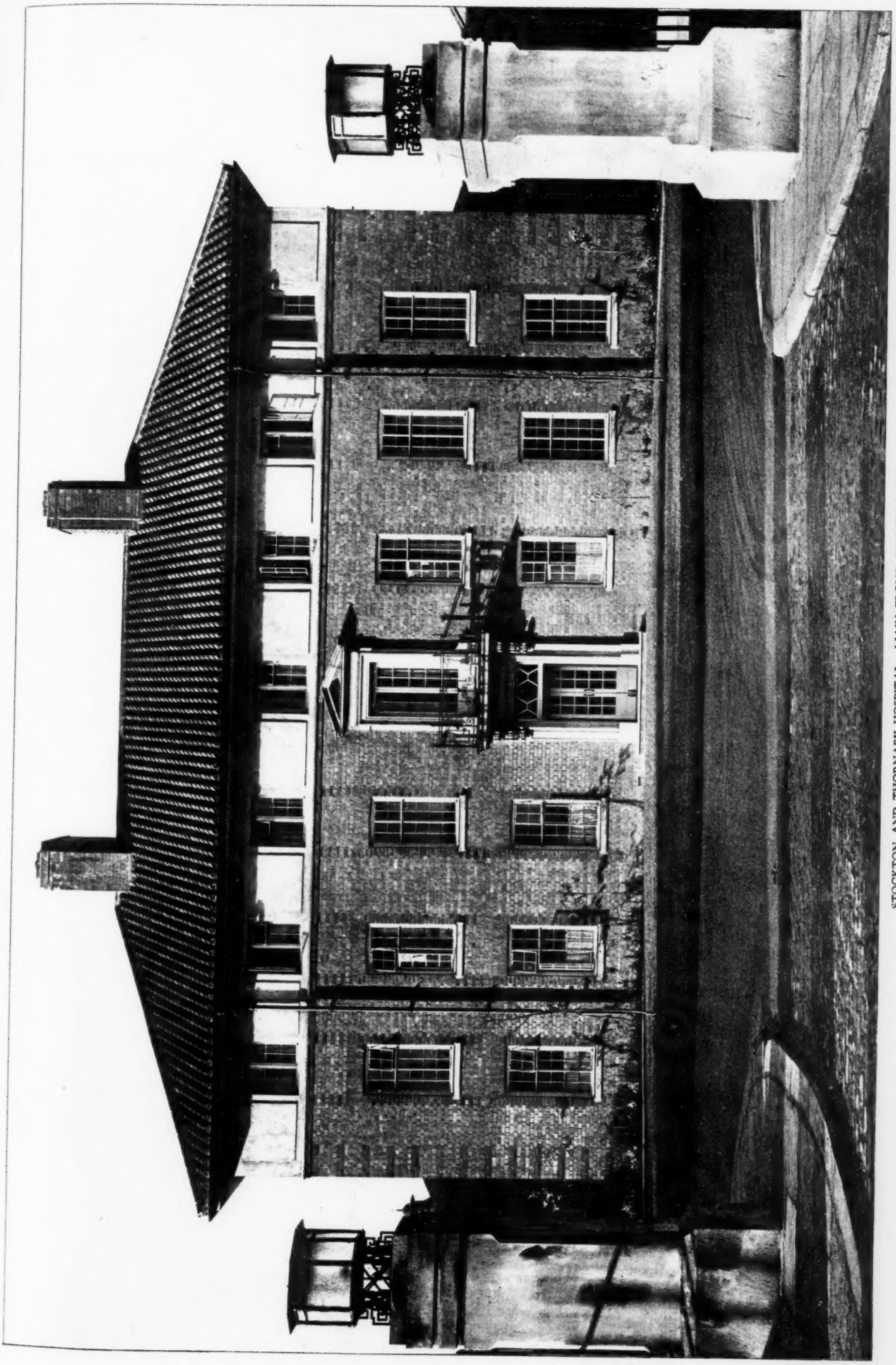
New Store Building for Messrs. John Barker & Co., Ltd., High-street, Kensington.

SIR REGINALD BLOMFIELD, R.A., Architect for the Elevations; MR. H. L. CABUCHE, O.B.E., F.R.I.B.A., Architect to the Company.

Messrs. Lanchester, Lucas & Lodge, FF.R.I.B.A., Architects.



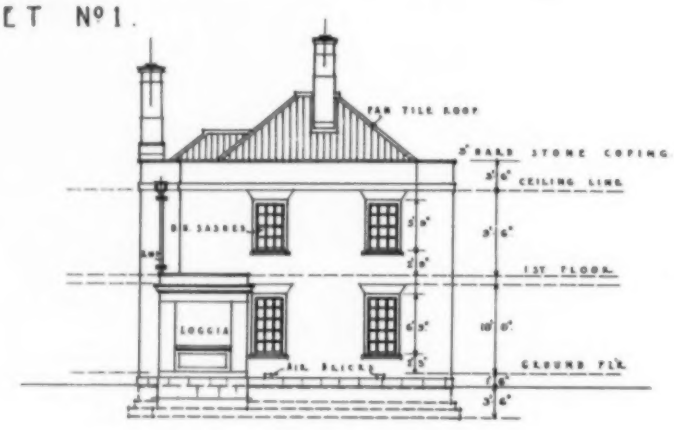
STOCKTON AND THORNABY HOSPITAL: VIEW OF LARGE WARD.
Messrs. Lanchester, Lucas & Lodge, FF.R.I.B.A., Architects.



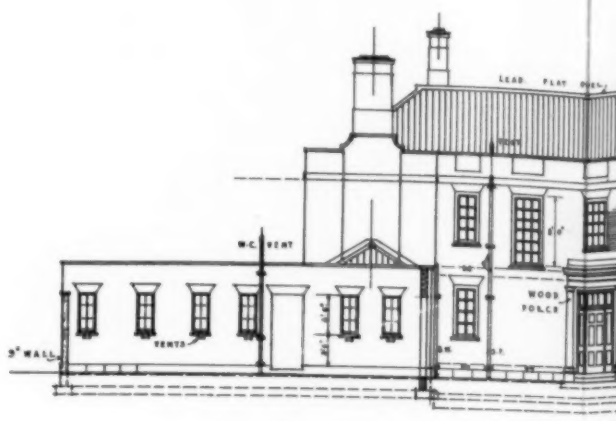
STOCKTON AND THORNABY HOSPITAL: MAIN FRONT, NURSES' HOME.
Messrs. Lanchester, Lucas & Lodge, FF.R.I.B.A., Architects.

HOUSE AT DATCHWORTH, H

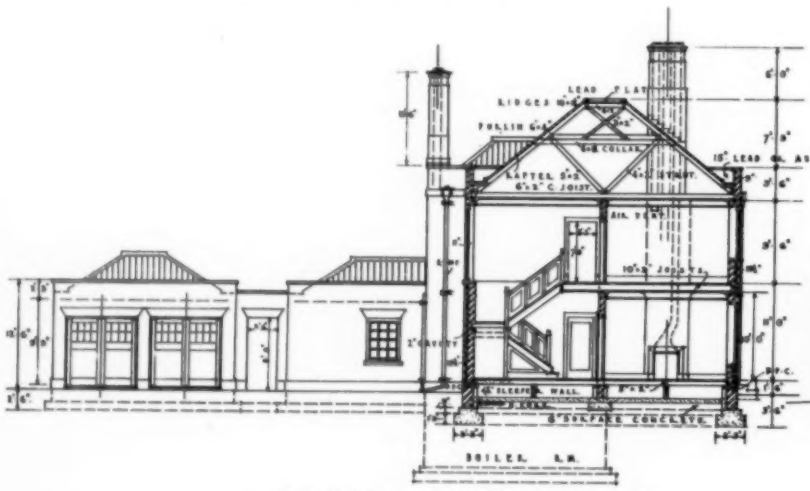
SHEET Nº1.



WEST · ELEVATION.

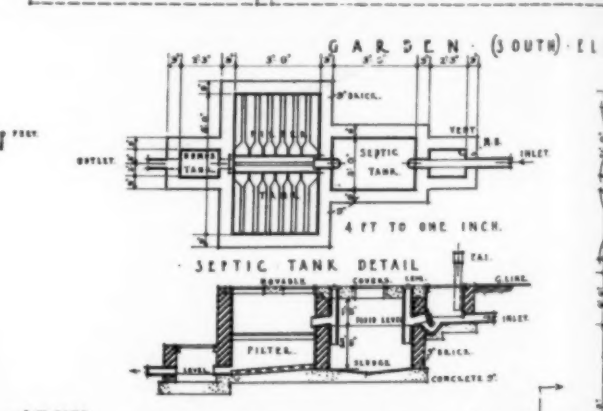


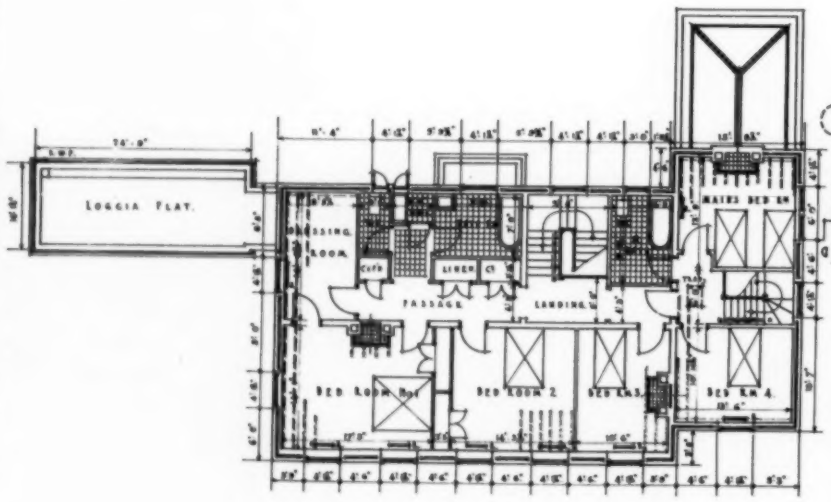
· NORTH · ELEVA



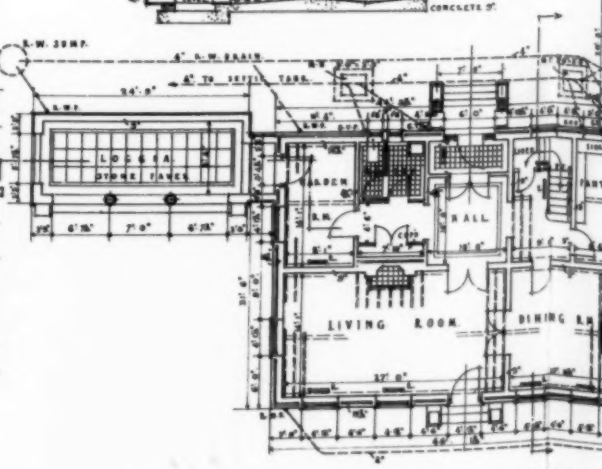
CROSS · SECTION · A·B ·

· SCALE · EIGHT FEET TO ONE INCH ·





· FIRST · FLOOR · PLAN.

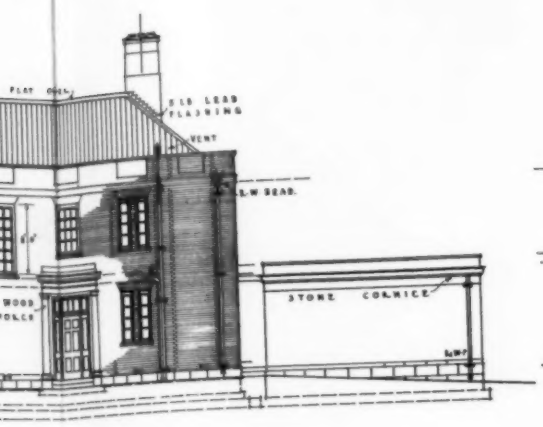


· GROUND · FLOOR

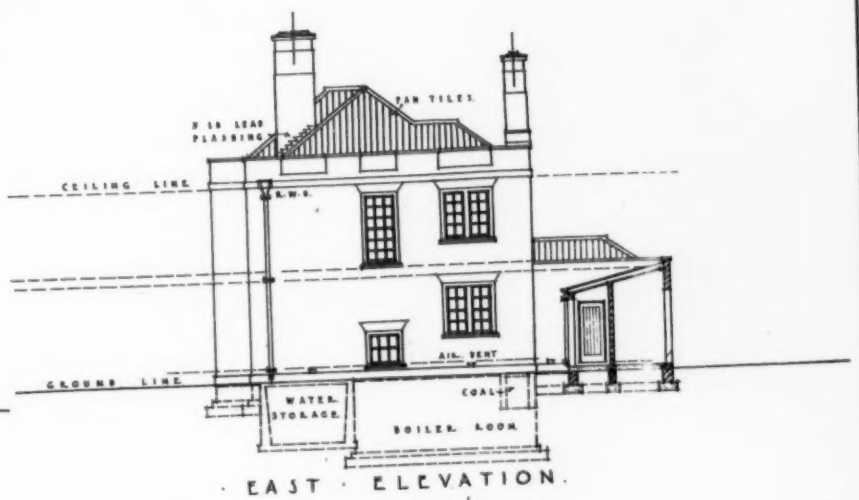
R.I.B.A. ARCHIBALD DAWNAY SCHOLARSHIP: WORKING DRAW

By Mr. R. P. Cummings (Architectura

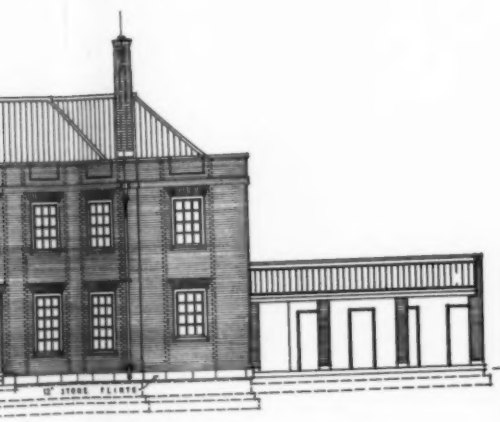
HERTS. FOR S.A.BOW ESQ.



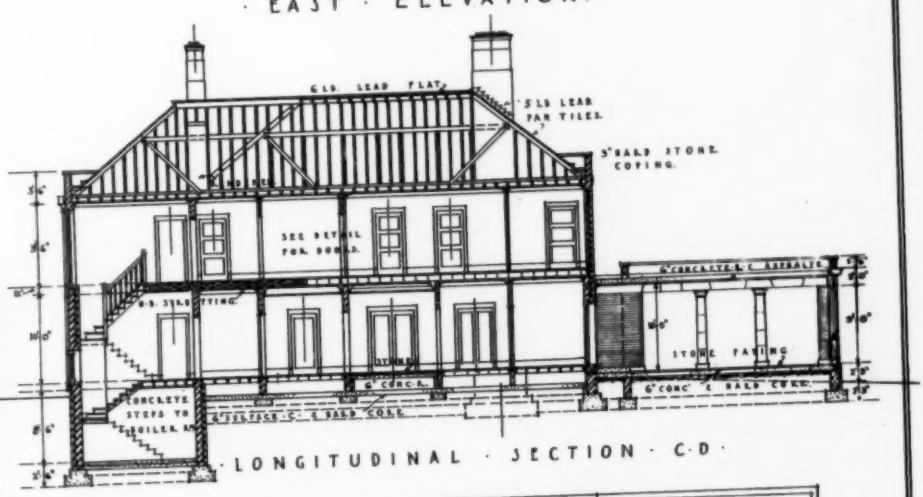
· ELEVATION.



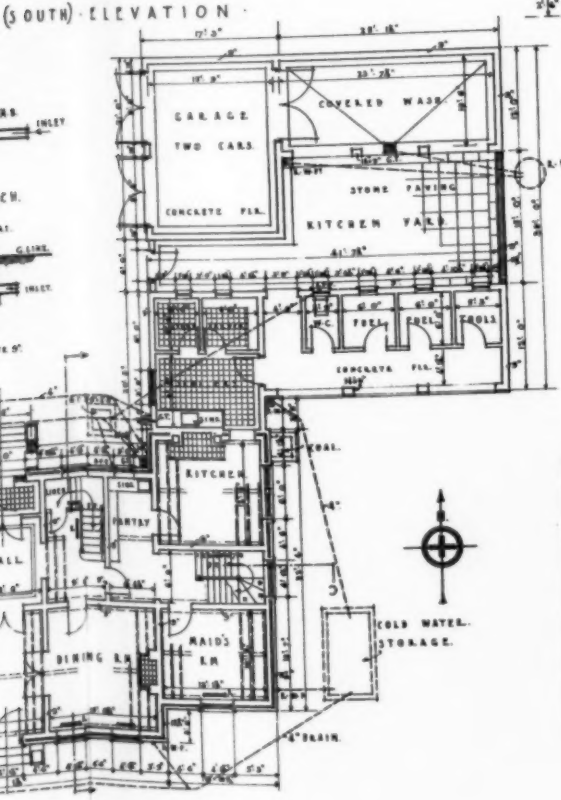
· EAST · ELEVATION.



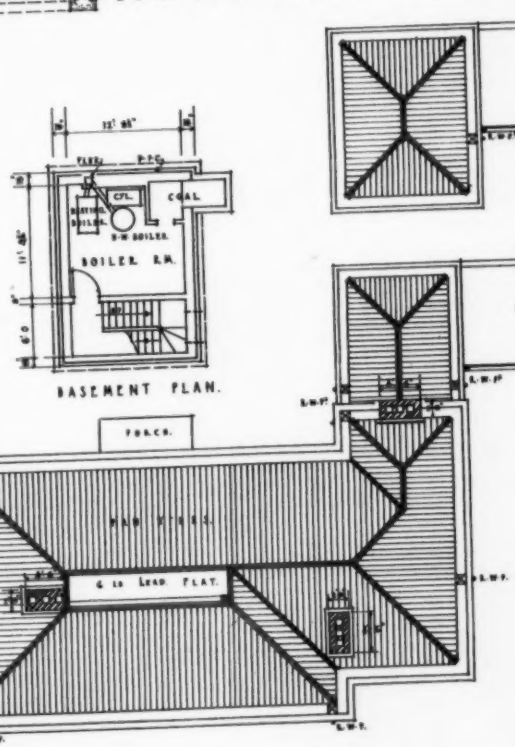
· (SOUTH) · ELEVATION ·



· LONGITUDINAL · SECTION · C·D ·



· FLOOR · PLAN ·



· ROOF · PLAN ·

L. F. CUMMINGS 16.9.26.

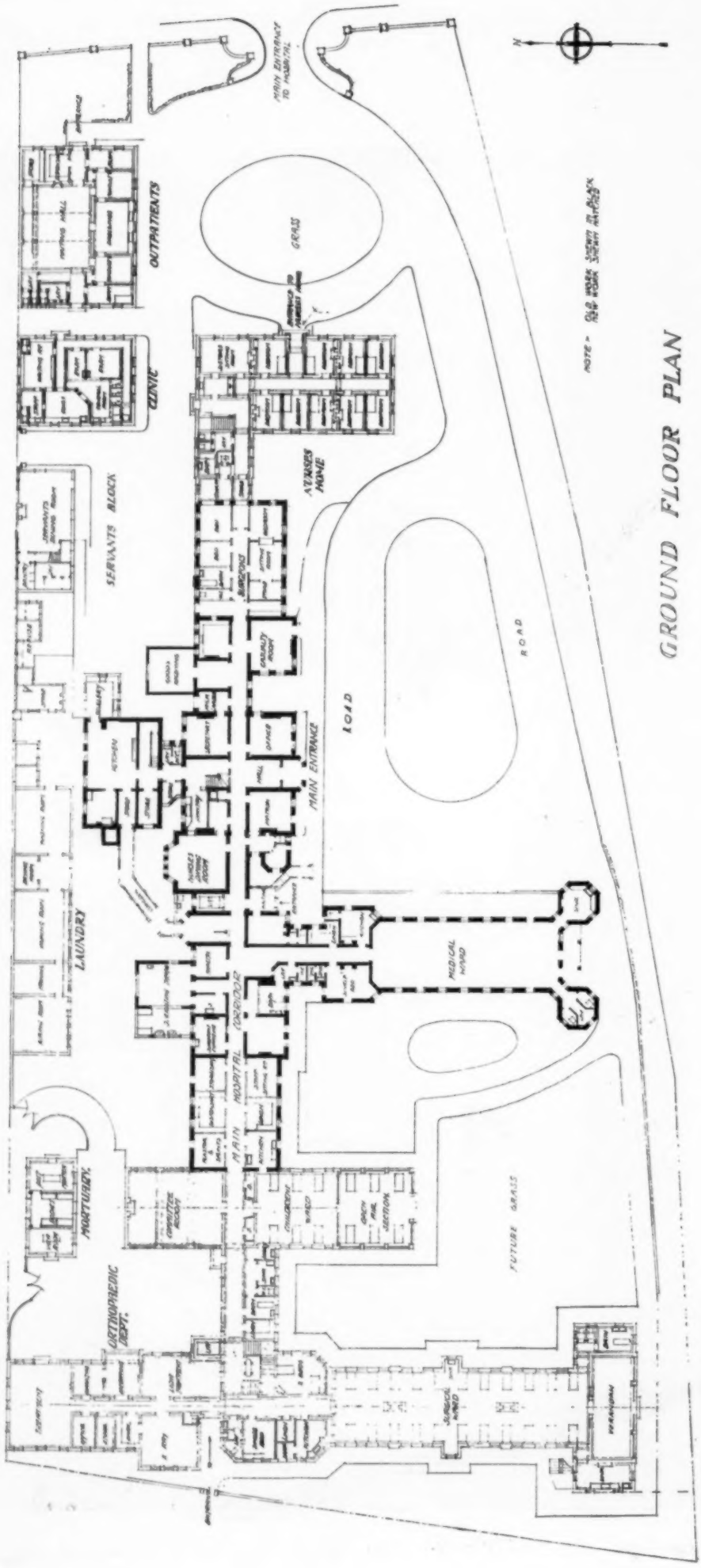
: WORKING DRAWING OF A DESIGN FOR A RESIDENCE.

nings (Architectural Association).

UNIV. OF MICH.

Stockton and Thornaby Hospital: Detail of Entrance to Nurses' Home.

MESSRS. LANCHESTER, LUCAS & LODGE, FF.R.I.B.A., Architects.

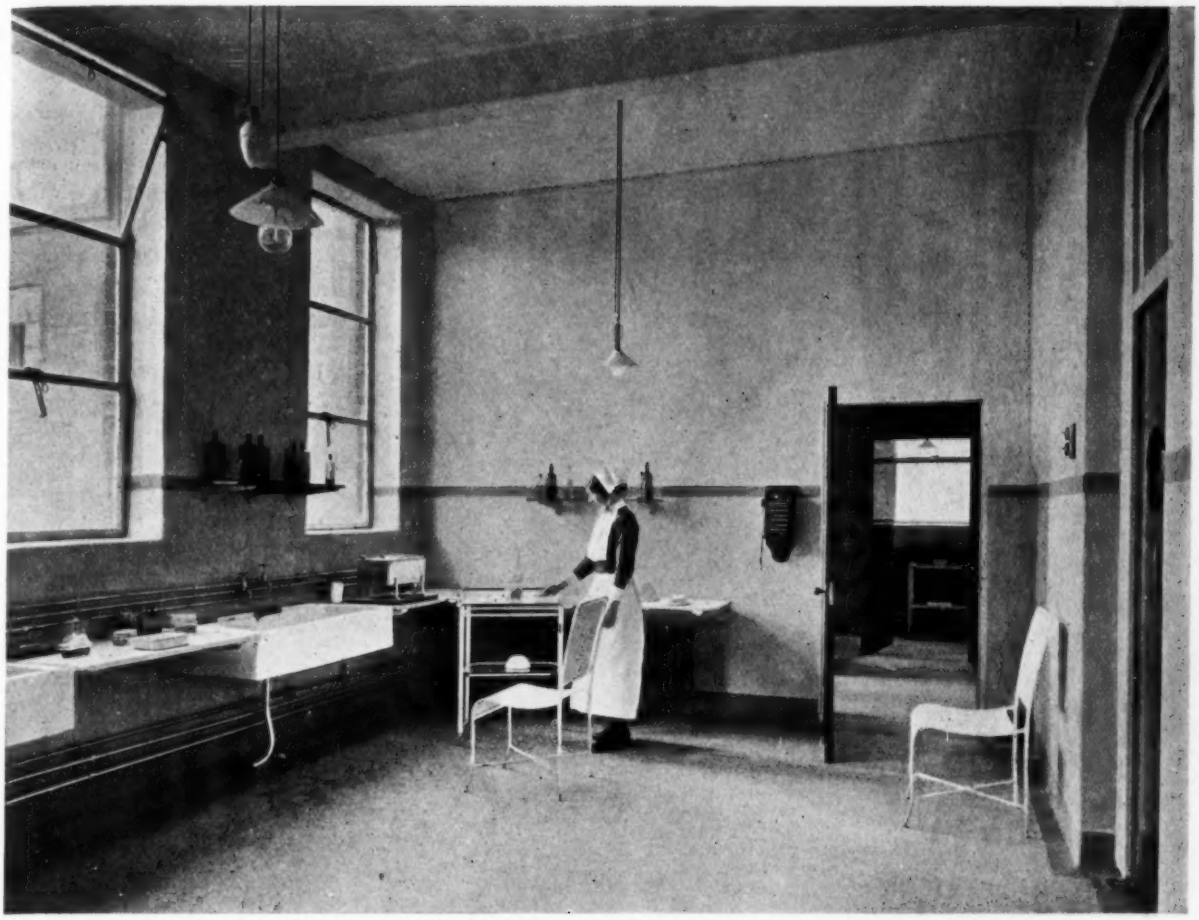


STOCKTON AND THORNABY HOSPITAL. PLAN OF OLD AND NEW BUILDINGS.

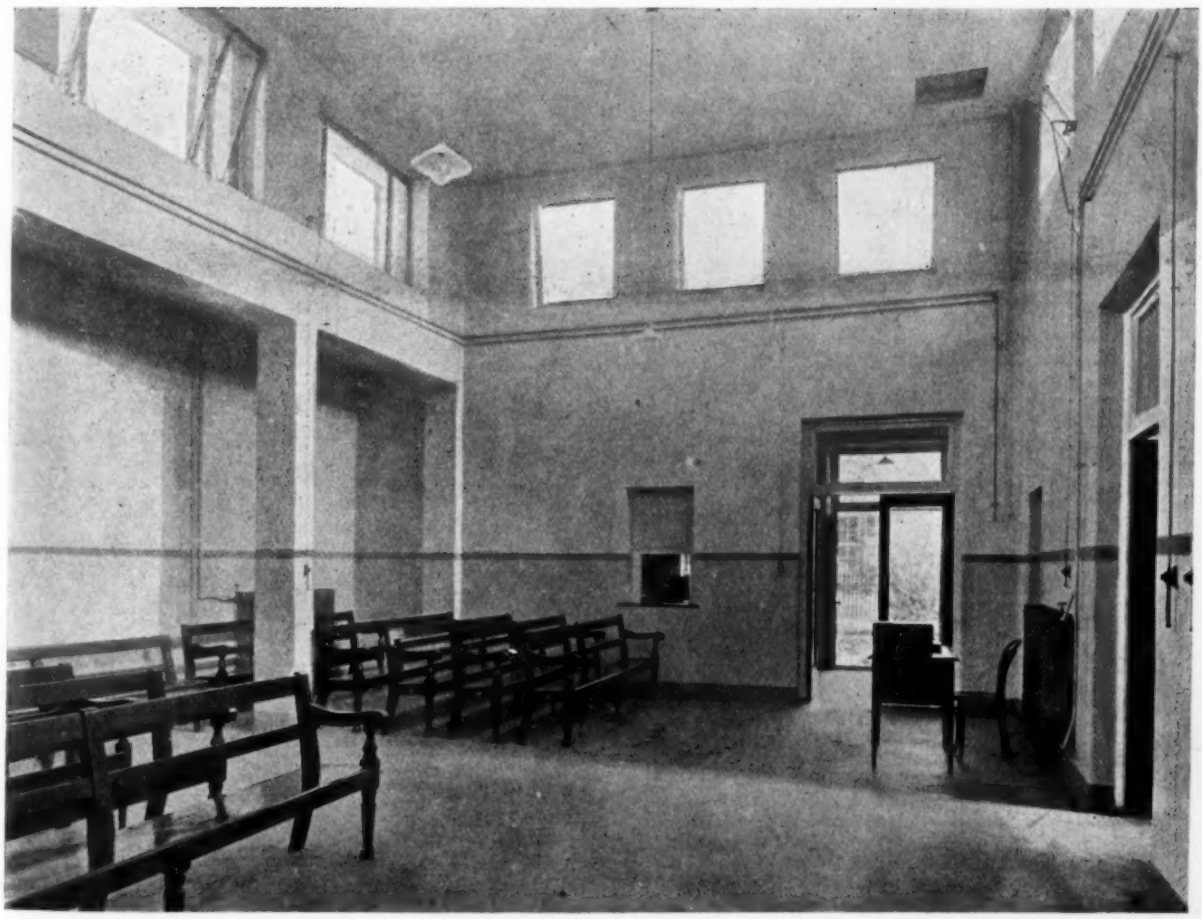
GROUND FLOOR PLAN

Stockton and Thornaby Hospital.

MESSRS. LANCHESTER, LUCAS & LODGE, FF.R.I.B.A., Architects.



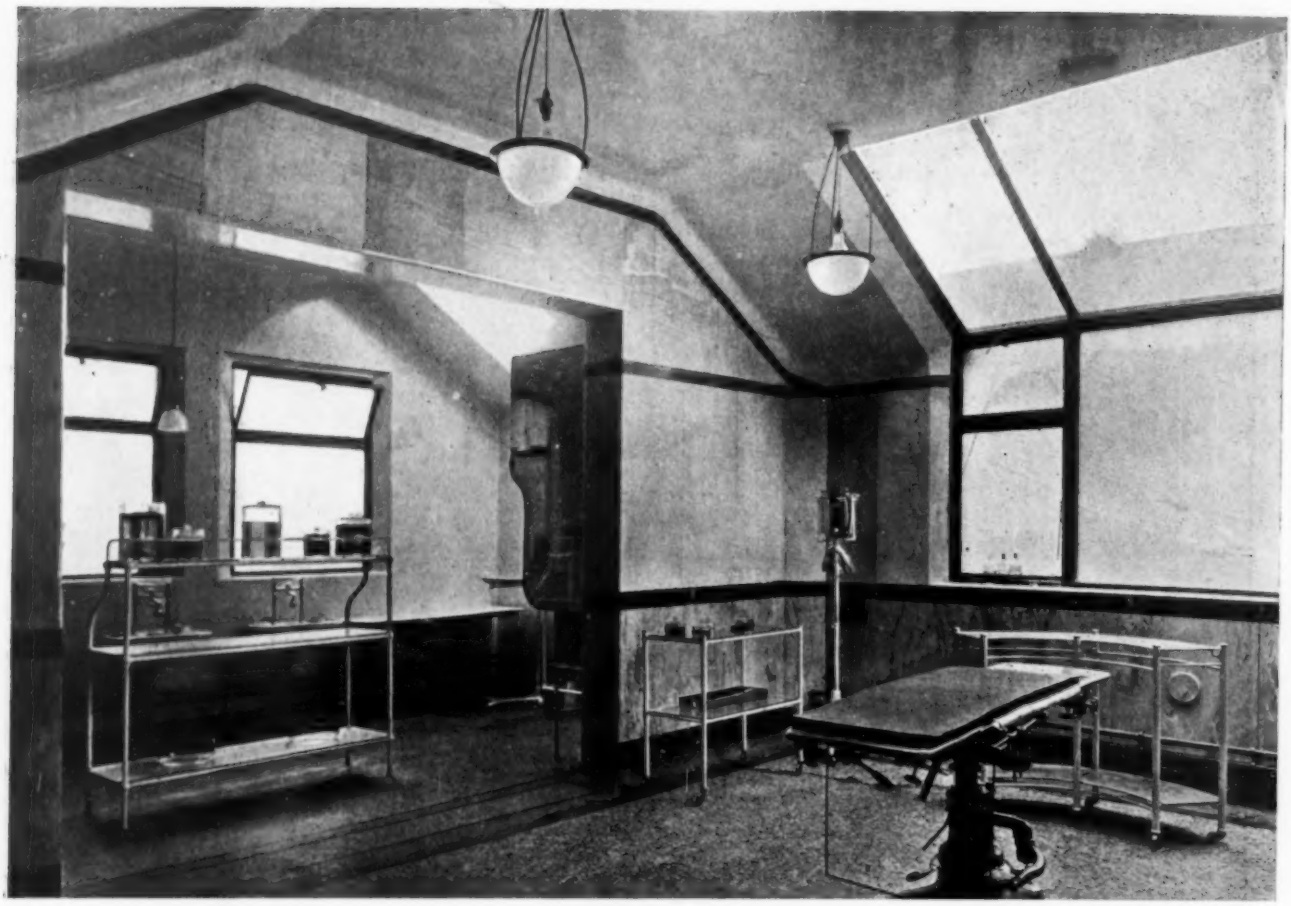
INTERIOR OF OUTPATIENTS' DEPARTMENT.



OUTPATIENTS' WAITING HALL.

Stockton and Thornaby Hospital.

MESSRS. LANCHESTER, LUCAS & LODGE, FF.R.I.B.A., Architects.



OPERATING THEATRE.

CHILDREN'S WARD.

Stockton and Thornaby Hospital.

MESSRS. LANCHESTER, LUCAS & LODGE, FF.R.I.B.A., Architects.

ENGLISH CAST-IRON.—III

By W. R. LETHABY.

More Railings.—After I had finished my last part I saw a pleasant, narrow-fronted house in the Gloucester-road region, built about a century ago. It was the usual thing, set back in its tiny forecourt shut in by a wall, a plain plaster front, about ten steps up to the front door with brass knocker, a casement window with a cast-iron balcony on the right, and a vine growing up the wall and falling around the window. It was one of hundreds, indeed thousands, that were being put up by the builders of that time, and a very reasonable type of dwelling it was. Seen from within, the small balcony was even charming, making a light screen outside the lower part of the window which went down to the floor. The bottom of this balcony is of iron bars spaced rather wide so that it can be seen through as easily as the upright part (Fig. 1).

Simple and reasonable as this pleasant work is, it might be said that there is something of

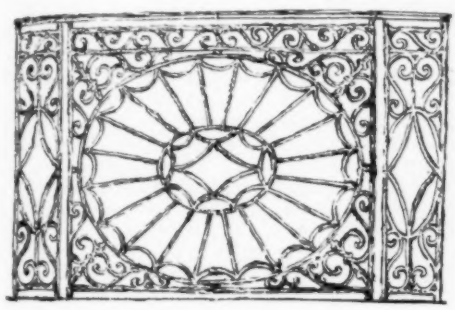


FIG. 1.

the "Adams" style in the filling of the oval. I hope the able designer of it felt this, for I have seen variants of the same general scheme where the oval is filled with a lattice pattern extended laterally. There is an example of this on the north side of the street entering St. James's-square from the east. In this district are many suggestive examples of

FIG. 2.

cast-iron railings. Turning up towards Piccadilly are some tall railings with standards of baluster form expanded into open loops at the bottom, and on the south side of St. James's

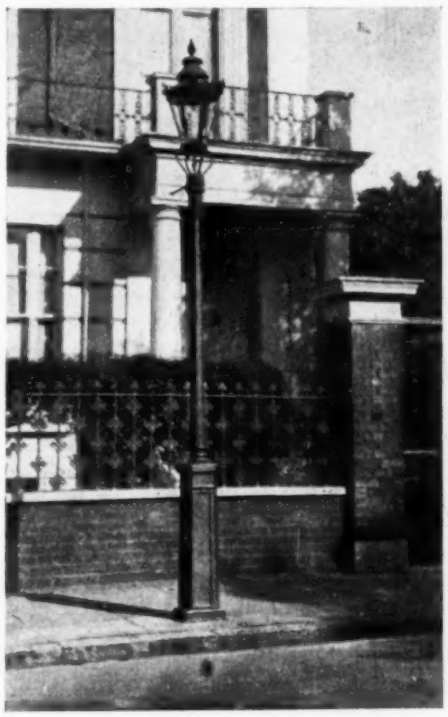


FIG. 3.

Church are railings in which panels of cast lattice work seem to be framed up in stout wrought bars.

The district where I am writing was largely built over about 1840, and here almost every house has varieties of cast-iron work in the customary manner of the time. This house has balconies both to the ground and the first floors. The former has open work strips about 6 in. wide, the latter simple uprights of blunt quatrefoil section which are thickened a little top, bottom, and middle to make them into a slim baluster form. The floor of this is of cast-iron plates in a net-work of hexagons with a running border, a pattern which I have seen extensively used for ventilating plates and the like. Next door the flight of front steps has balusters, small top and bottom, but expanded in the middle into open work.

In Fig. 2 is given the front of a house near "here" which has a first-floor balcony of one of the latest of these common catalogue patterns. Fig. 3 is "just opposite in my street." The front railing has lattice-like expansions alternately two and three to an upright—quite a pleasant possibility of variation. The balcony has balusters which at a distance look something like Fig. 4.

FIG. 4.

The handsome railing of the courtyard of the British Museum, set up about 1850, was a new departure. Although it is very competent, and "ably designed and all that," it has lost the traditional character of our best cast-iron work, which always retained a kind of workshop or engineering element. The upright standards small and great are designed after the fashion of antique candelabra and it is definitely sham-classic. The new British Museum was commenced in 1823 under the direction of Sir Robert Smirke, but old Montague House was not finally destroyed until 1845, and the portico was finished in 1847. The railing would hardly have been put in hand until this time. It was the work, as an inscription cast here and there shows, of John Walker, of York. Smirke designed the railing, but to some unknown extent Alfred Stevens helped in working it out. Stevens, born in 1818, studied long in Italy, and in 1845 was instructor at the School of Design, South Kensington. In 1850 he was designer for Messrs. Hoole & Co., founders, of Sheffield, but returned to London early in 1852. "He designed amongst other things the vases on the top of the railings in front of the British Museum and the lions sejant on the dwarf posts in front of the grille." (D. N. B.)

It looks to me as if all the modelled ornament was in the manner of Alfred Stevens. According to the late Hugh Stannus, who was a pupil of Stevens, "the wonderful little sitting lion was modelled by Stevens, but was scarcely his design. It was modelled from a sketch which Sidney Smirke made of the lion on the staircase in the Bargello Palace at Florence, but Stevens put so much of his own feeling into it that it might almost be called a new creation. It was the finest sejant lion ever made. With cast iron there was a pre-Stevens and a post-Stevens period. The new inventions and new treatment which Stevens introduced when he went down to an iron and bronze foundry at Sheffield would require an entire lecture to deal with."

I find myself in entire agreement with this view; from that time the customs of the shops were pushed aside by whim-work design in the sham styles. Vulgarity came on in a flood.

Grilles and Gratings.—The pleasantest window grilles I know are a set of ten filling the large openings of a warehouse in Praed-street, Paddington. These are really excellent—fearless in making similar scroll work fill unequal spaces and in the use of sufficient cross-ties. One oblong panel of scroll work is repeated twice over in each grille, and the both are surrounded by a triple row of plain diagonal piercing. Fig. 5 is a detail. I suppose that these pierced iron

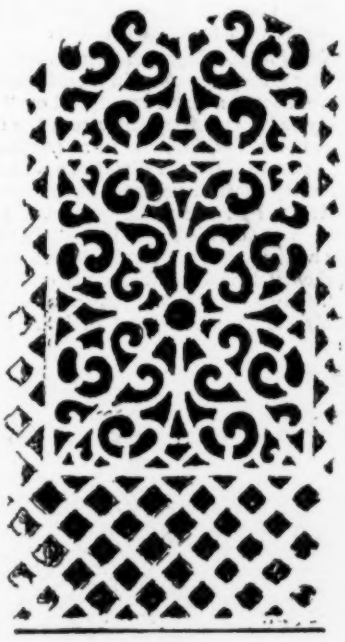


FIG. 5.

panels were the purely commercial product of a foundry, but the man who devised them was a master of his craft. I doubt if they are more than about 80 years old, and yet they might be of Wren's time. There is in them something of the tradition of the balcony railing, Fig. 1.

At the Albert Hall are some large and heavy grilles filling openings in the great porches. These are more ambitious and "architectural" than those last described, but they are good of their kind and look as if they had been designed by Godfrey Sykes or Moody.

In the porch of Kensington Palace two glazed wind-screens fixed between the columns look as if they might be of cast-iron, but this I can't guarantee, perhaps the bars are too thin

for the material. In any case they are of good and suggestive type, and show how easily window frames and fanlights might be of iron castings (Fig. 6.)

On the north side of Brook-street, quite close to the Royal Institute of British Architects, may be seen a screen of perforated iron plate flanking

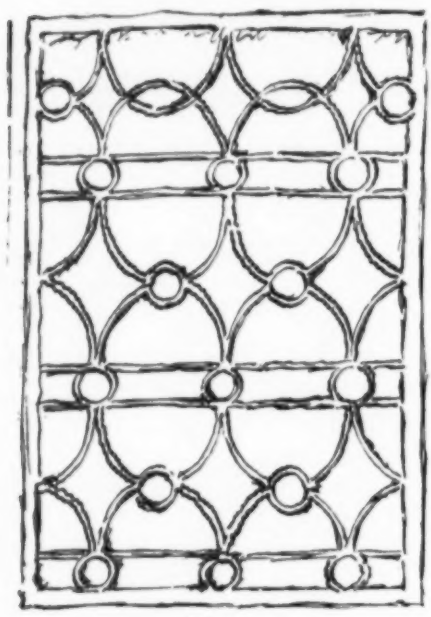


FIG. 6.

the doors to a shop. It is rather elaborate and not very good, but again it is suggestive.

Some excellent floor gratings, but a little over-designed and too full of "style," are those for the heating system in the Victoria and Albert Museum. The floor gratings in Westminster Abbey and the British Museum are simpler but quite good. A favourite grating much used about 1840 was of honeycomb pattern with a simple border, as mentioned above.

Covering Plates.—Many of these are excellent to this day: they are done in a customary way and have been unvexed by office boy "design in the styles." One frequently sees the surface roughened by dividing it into squares and ribbing them in different directions alternately. In a country town I recently saw some drain covers treated in a similar way; the ground, however, was divided up into "diamonds," forming a star pattern. Again, the ground may be roughened by raised diamonds or hexagons (Fig. 7). Most of the coal plates we walk over in the streets have escaped "design," and are

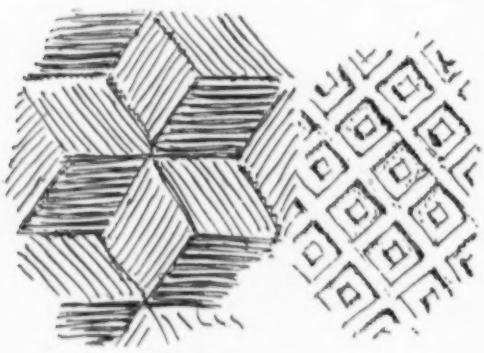


FIG. 7.

quite right; some, indeed, are admirable, and I have found myself sketching them.

Lamp-posts.—Tens of thousands of old lamp-posts must exist in London and other English towns. Many of these which still remain represent the first lighting of the several districts, and I wish specially to call attention to them as—more or less—ancient historical monuments which should be preserved and taken as examples of character. The first street in London lighted with gas was Pall Mall, in 1807, and the last street or square lighted with oil was Grosvenor-square, in 1842. St. James's Park was lighted with gas in 1822. Glass lights or convex lights for oil lighting were introduced in 1692 [?]. The first were placed between the palaces of Whitehall and Kensington. In 1692 Sir C. Wren was instructed that "Their Majesties having been at the charge of buying and providing a great number of lamps to light the road from Whitehall to Kensington House, and it being necessary that the said lamps be forthwith taken down and preserved for their Majesties' further use the next winter, we do desire you would, with all convenient speed, cause a shed to be erected in the wood yard at Kensington House large enough to contain three hundred lamps, which we doubt not but you will comply with." (Cunningham's *Handbook for London*, 1847.) At the corner of Knightsbridge and Charles-street is an open-work standard on a railing which may have been for the oil lighting. Three Acts of Parliament relating to the lighting of London were passed, 9 and 17 George II and 2 George III.

Some of the standards provided for the oil lamps still probably serve for gas lighting. The excellent open work standards of Waterloo Bridge must be the original provision for lighting it. In the district where I write there are two or three varieties of old lamp-posts (Fig. 3). The earliest seem to have been made in two pieces, a long upper shaft being inserted into a thicker pedestal piece. One type, and that quite excellent, is fluted from top to bottom, the flutes expanding into a low base (Fig. 8). These look very rigid and tidy, and are hardly to be bettered. In a little country town, about a month ago, I was pleased to see this pattern used in the most recent additions to the lighting system as well as in the oldest. All these old customary things are quite good and strong, but properly dull and modest as they should be. Everything must not scream! Some excellent types still enlighten the back streets of the west and west-central districts and elsewhere. In Downing-street the other day I was pleased to find a set surviving of a very quiet and pleasant type; while Whitehall has recently been furnished with all the terrors of "grandeur." In St. James's-square are some pleasant old things, one especially which has a slender upper stem rising from a big base, like a cannon, is quite nice.

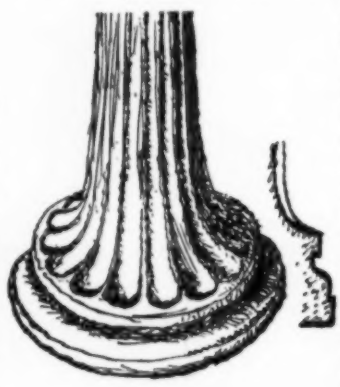


FIG. 8.

At this point, as it was a lovely autumn afternoon, it occurred to me to walk across the Gardens to archæologise the lamp-posts of Kensington Palace and neighbourhood. Leading up to the Palace from the High-street is a row of rather closely-spaced standards of the right old-fashioned kind, on the pedestal parts of which are the crowned initials of George III. They may thus be dated before 1820, say, 1810, and they doubtless superseded the oil lamps of Wren's time and are among the earliest of existing lamp posts. (Fig. 9.) The pedestal parts are roughed or ribbed across horizontally. Similar standards, without the Royal mark, are not infrequently to be found. The lamp-posts used in the borough of Kensington, so far as I observed, are of an excellent type, strong, simple, pleasant. They are eight-sided throughout, and the profiling is accomplished wholly in straight lines (Fig. 10). I suppose this is an old pattern

FIG. 9.

which has been maintained in continuous use: in any case I should like to congratulate the authorities for having such nice things. These and the beautifully clear street signs recently put up give Kensington the appearance of being cared for by men who know.

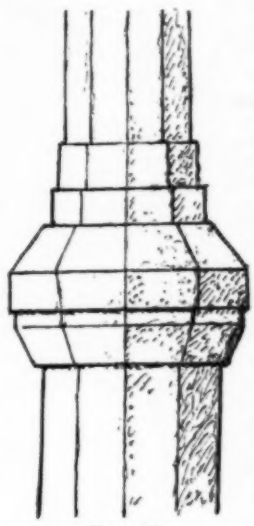


FIG. 10.

Here and there in London are some exceptional and more ambitious lighting standards. The best of these known to me is a group of six at Hyde Park Corner, set out in relation to the gate-way, and probably part of Decimus Burton's design. They would thus be almost exactly a century old. If we were not blind the whole re-lighting of Piccadilly should have followed such a lead. In Hyde Park a model, more competent and pleasant than usual was followed, and one of the same type is found in the open space at the West End of Westminster Abbey. It looks as if Stevens had a hand in designing it. This is quite an ambitious lamp-post, more fussily ornamented than usual, but well done of its kind; it might be adopted where better things would not be tolerated. Around Lancaster-gate Church, and here and there in the neighbourhood, a middling sort is to be found, rather pretentious and vulgar, but still preserving dregs of the cast-iron tradition.

The best quite modern lamp-posts I know are some in Knightsbridge, dated 1910. They are semi-quiet, almost customary, and less vulgar than usual.

The modern and over-designed lamp-posts of the parish of St. Martin le Grand have a quite pleasant little modelled relief on their pedestals. Some excellent short standards on gate piers in Park-lane have already been spoken of. I may here mention the cast-iron tripod sort of things which stand in niches in Drury-lane Theatre; they are absurd enough, these sham-classic objects without any function, but it must be confessed that they are very well done and excellent examples of iron casting. I suppose they date from about 1812, and were designed by Wyatt. When I say "designed" for all these things, I mean something like "suggested" or "sketched," for in these older works there was room for customs of the trade to be embodied. The system of full-sized detailed drawings by office boys, and the consequent total enslavement of working artists, had not at that time been worked out to its black doom. All the things I am speaking of were works of workmanship not solidified drawings,

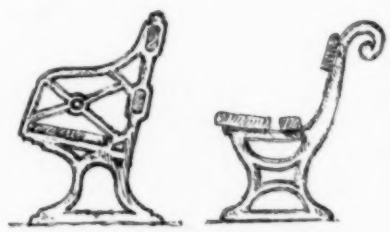


FIG. 11.

and ornament was modelling, not a worrying of a surface to resemble a "design." In regard to the arts, the last century was the time when designing got the better of doing.

With lamp-posts, I may just note the guard-posts, which used to be much more common in London than at present. There is an excellent set with ducal coronets in a passage between Southampton-row and Queen-square, W.C. Four of a fairly good type are fixed around the lamp-post at the west end of the Abbey above mentioned.

(To be continued.)

FACTORIES

MR. HAROLD L. FARMER read a paper on December 2nd to the Auctioneers' and Estate Agents' Institute on "Factories and Something About Them," in the course of which he said every factory nowadays might be a good factory, but how good depended upon its situation, construction, equipment, and the power to work on a sound basis of efficiency with economy. The first governing principle to the successful establishment of a works must be its geographical situation, in relation to its capacity to obtain raw material, and the distribution of the finished product. It was not the cheapness of the site that was the essential factor, but the immediately obtainable facilities and commodities which would assist in making for cheapness in production. There was no lack, in nearly every city, town or hamlet in the country, of available building land or sites with both railway and waterside facilities, suitable for the erection of factories, &c., and, broadly speaking, land in the country was to be had cheaply with the absence of those restrictions which retard progress.

The lecturer here touched upon areas developed recently as garden cities, and said that one of those foremost in the field, which had attracted many manufacturing concerns to establish works in its area, was The First Garden City, at Letchworth, Herts. The health of the worker was, in a great many cases, the first consideration in modern industries. At the present moment further benefits were being sought in the Factories (No. 2) Bill before the Government, the objects being to obtain additional improvements and benefits, which would add materially to the safety, happiness, and welfare of the worker in all kinds of factories.

Factory organisation and production were dependent upon—Construction and planning of works; arrangement of departments; equipment of motive power; installation of up-to-date labour-saving plant and machinery, in order of sequence, to work the raw material into the finished product; general management; handling of goods, overseeing, watching details; stopping leakage, &c. A factory was well designed when the percentage cost of the necessary internal standing charges were reduced to the lowest possible point consistent with efficiency.

The essentials in a building were: (1) Design necessary to the occupation, (2) lightness of construction, with great strength, (3) good ventilation, lighting, proper heating of rooms, &c. Reinforced concrete and steel fireproof construction were very largely adopted, and brought about an immense saving in the cost of construction, upkeep, insurance, &c., and insurance is a very considerable item in a large works operating a hazardous business.

Difficult problems were at times met with by a valuer, such as how to proceed to find out the value of an undertaking. In cases where the building was suitable only for the particular business occupying it, such as glass works, paper mills, &c., the value could not always be determined by assessing the cube of the building, nor at so much per foot of floor area. The industry carried on in the building was incorporated with them, more or less as a whole—the value of the buildings and plant, therefore, could not be assessed separately. Properties of this description did not bear rental values in the ordinary way, which could be capitalised to arrive at a sale price. Such undertakings were, for all practical purposes, going concerns, and should be valued as such on the basis of efficiency of equipment, working capacity, earning power and goodwill of the industry.

Many were the different purposes for which valuations were required—the sale or letting of vacant works; insurance; mortgage; dissolution of partnership; company, private or public; probate; and the disposal of a current going concern, say, as between a willing buyer and a willing seller, in which case the assets would include plant, machinery, utensils of trade, &c., also goodwill. The last-mentioned were an asset which, he thought, should be appraised by the accountant to the company, as many deductions from gross revenue were necessary to arrive at the net income, before a capital sum could be placed on its value. Regarding the valuation of machinery for replacement in the event of a fire, a valuer should at all times keep up with ruling prices, more especially in view of some insurance policies containing an "average clause." One of the many important factors connected with the value of factories and industrial undertakings was assessment for rating purposes. Before the proposals made in the Rating and Valuation Bill, 1925, personal property, at one time, was legally subject to rating, though the legal liability was often not enforced; but although personal property was not now rateable, yet it might sometimes be taken into account in arriving at the rateable value as enhancing the value of the hereditament in which it was placed. It was in this way that plant attached to real property was an item to be taken into account, without considering whether it is real or personal property. In many cases the machinery was of greater value than the land and buildings, but the principle of valuation was to assess the figure on the basis of what was the rent a hypothetical tenant might reasonably be expected to give for the property, subject to the specified deductions or allowances granted by the various authorities in whose area the property was situated.

The Rating and Valuation Act, 1925, which did not extend to Scotland, Northern Ireland, or the Administrative County of London, set out in the Third Schedule to the Act that those classes of plant and machinery which are deemed for rating purposes to be part of the hereditament were: 1, Machinery used for generation, storage, primary transformation; 2, heating, cooling, ventilating, lighting, draining, &c.; 3, passenger lifts and elevators, railway and tram lines and trucks; 4, and such plant or any combination of plant, including gas holders, blast furnaces, coke ovens, &c., as was, or was in the nature of, a building or structure.

As previously mentioned, the County of London was not within the scope of the Act, but a Rating and Valuation (London) Bill was now being drafted; with the proposal a new valuation list should come into force on the first day of April, 1931.

The lecturer concluded with a short note on the equipment of the power plant and said that it was essential that the motive power used should be cheap, reliable, adaptable and easily controlled. Water power was not a plentiful commodity in England, but in most districts electric power could be purchased from a local supply company at a cheap rate. If no supply was available a plant could be installed, using as the motive power, steam, gas, crude petroleum, paraffin or petrol, the choice being determined by local conditions.

Staircase in New Store Building for Messrs. John Barker & Co., Ltd., High Street, Kensington.

MR. H. L. CABUCHE, O.B.E., F.R.I.B.A., Architect to the Company.

BIRMINGHAM POSSIBILITIES

IN a recent lecture at Birmingham University on this subject, Mr. William Haywood, F.R.I.B.A., said, now that the central area of Birmingham was to be replanned, there was an opportunity of making the heart of the city worthy of the great community it represented. The greater part of the area in question was public property, and being for that reason in no danger of exploitation by private individuals the policy of secrecy usually observed with respect to the alterations of existing towns was abandoned. The design chosen in the forthcoming competition would be carried out in sections from time to time as occasion arose; but obviously a great expenditure of public money would have been made before the scheme was completed, and, as the project was largely an æsthetic one, they stood to gain or lose greatly by the artistic ability of those to whom this work was entrusted.

The Cardiff Civic centre, planned some 25 years ago, and visited recently by Birmingham's municipal representatives, might be taken both as an example and as a warning. Cardiff's centre was a good example of a bold policy, good architecture, and a pleasant environment; but apart from the high quality of some of its buildings, and the way in which these had been grouped together rather then scattered on separate and inadequate sites, the plan had no merit whatever. The road plan failed to relate the new centre to the town in a reasonable manner, and it provided a mere chequer-board of building sites, which rendered group design, and the proper association of road and building, impossible.

Birmingham should do better than that; yet it would appear from the notices so far published that her chances were likely to be handicapped by the exclusion from the competition of that prospect of building, which was the usual reward offered to successful competitors. It was said that the sole inducement to compete was to be a money prize and it was to be feared that men of standing were not likely to find such terms attractive.

Assuming a design chosen and that area planned, and remembering that the town outside a half-mile radius of the Town Hall was already planned in its main essentials by the comprehensive arterial road scheme put forward by the Public Works Department in 1917, they had an outline of the complete city plan of the future, save for an intervening area between these two sections, which was to remain more or less unconsidered, because in private ownership and liable to exploitation. It might be asked whether we really gained by so much caution, and whether the American method of full publicity and trust in one's own bargaining power was not more profitable. One of the chief merits of the new centre was that it provided more open space in the heart of the city. It should be made as large as possible, and be followed by many similar open spaces, neighbourhood centres, and children's playgrounds, for use where suburban facilities were not accessible. The health of the town was much affected by such provisions, and its pleasantness also.

It was essential that the new centre should have convenient and dignified approaches from Ladywood, The Parade, Colmore-row, New-street Station, Suffold-street, Holloway Head (High Level) and Broad-street, and of those approaches the most important by far was that from New-street Station; not only because the station ought to have direct association with the chief civic buildings, but because the upper town, represented for that purpose by Broad-street, Paradise-street, and New-street, had no proper relation to or communication with the lower town, represented by Navigation-street. Traffic needs alone called for a drastic alteration of the road plan in this area; and if the æsthetic aspect of town planning was to stand for anything in Birmingham, it was here that they had their greatest opportunity for monumental expression. Let Hill-street, from Navigation-street to Victoria-square, be widened to form another open space, with central gardens and a road on either side; arrange this axially with the Town Hall, with adequate buildings on either flank, and Birmingham would have an example of roads planned in relation to public buildings which would be an inspiration to their citizens, and an indication to those who visited them that Birmingham was not without culture in her public life.

OBITUARY

The Late W. E. Davis.

IT is with much regret we record the death of Mr. W. E. Davis, a well-known quantity surveyor, of No. 9, John-street, Adelphi, W.C., and a former Chairman of the Urban District Council of Carshalton, where he was well known and respected, and where he resided for many years. His death, following a long illness, which was no doubt accelerated by the recent death of his eldest son, will be widely regretted, not only by those who met him professionally, but by his many personal friends who could not fail to be impressed by his professional efficiency as well as his high principles and sincerity, his cheerful disposition, and his many activities and interests. He had decided views on many questions of the day, but while he did not hesitate to express them in public, he did so with such courtesy and fairness that he won the lasting respect even of his opponents, and it is doubtful whether any man of character ever made fewer enemies. He had a capacity for making friends, one of whom writes as follows:—

"William Edward Davis was a man whom to know was to admire for his many excellent qualities. A friendship of nearly forty years' duration enables one to speak of him with the confidence begotten of close intimacy. He was of a particularly cheerful temperament, never failing to see the humorous side of things, and possessing an endless store of amusing anecdotes.

"His activities were many and various. A diligent, even strenuous worker in his profession, he yet found time to engage in numerous other duties. He was a prominent temperance Freemason, a conscientious member of the Urban Council for the district in which he lived, more than once its Chairman, and a hard-working member of its committees. Few local functions took place without his cheery presence, and at these he was a ready and acceptable speaker.

"Of his professional abilities one can speak in the highest terms. Practical, careful and painstaking, he was always to be relied upon to give of his best to every client who consulted him. A man of high principle, a sound adviser and a warm friend, he leaves behind a memory which will be long cherished by all who knew him."

The late Mr. Davis was born on December 1, 1862, at Cranbrook, Kent. He was articled to Mr. Deacon, quantity surveyor, of Charing Cross (who died this year) and was with him for several years. Mr. Davis started in practice for himself about thirty-four years ago at Falcon-court, Fleet-street, and was there only a short time, moving subsequently to 13, John-street. He was a member of the Carshalton Council for twenty-one years and chairman for three years, and was one of the founders of the Kingsway Lodge and Past-Master of that Lodge and Villiers, and was granted London rank some years ago. He was a member of the Surveyors' Institution, the Institute of Arbitrators, the National Housing and Town-Planning Council, and of the Upper Norwood Athenæum. Mr. Davis took a great interest in archæological as well as architectural matters, and was first President of the local Archæological Society. He wrote "Quantities and Quantity Taking," and formerly contributed frequent articles to *The Builder*. During the ast few years he edited "Laxton's Price Book." He also read papers before the old "discussion section" of the A.A. He became a member of the Association in 1889. The practice of W. E. Davis & Son will continue to be carried on by Mr. W. E. Davis's nephew and one-time pupil, Mr. P. T. Walters.

THE ACOUSTICS OF PUBLIC BUILDINGS

IN the third and concluding lecture of his series of three on this subject, at the Royal Institution, Mr. G. W. C. Kaye dealt with the prevention and absorption of sound echoes. Speaking of the Greek and Roman open-air theatres—of which there was an example in this country at Bradfield College—the lecturer said that in the open-air sound travelled by direct radiation, and, consequently, echoes were practically non-existent. The auditorium was in the form of a semi-circle with seats set round in ever-rising tiers, but as the actors' voices, to reach the back seats, might have to travel some 200 ft., it was more than likely that they possessed some peculiar trick of intonation. With modern buildings, however, there were immediate complications, for ceilings and walls produced reverberating echoes. Speaking of the room in which they were then seated (the lecture hall of the Royal Institution), the lecturer said it was the ideal hall, for sounds emanating from a speaker were absorbed by the whole room in .059 of a second. All lecture-halls were not so satisfactory, however. In the case of the British Institute of Radiology, the corresponding figure was 1.7 secs. when full, and when empty, 3.7 secs. Theatres being usually extremely high, the problem presented by the echo was often acute. He quoted the instance of the New Theatre, New York, where Dr. Sabine had dealt with the problem by means of a reflector on the roof and by lining the walls and the appointments of the auditorium with sound-absorbents. Our own Houses of Parliament, when finished in 1848, were acoustically imperfect until a false ceiling was introduced in 1850, which improved matters considerably. Even so, the reverberation period was 3 secs. empty and 1½ secs. when full. In concert halls, on the other hand, insufficient reverberation was bad, for it made for "deadness" of tone, and for this reason such halls were usually high. Hardness of materials created excessive echoing, and this fault occurred frequently in churches. Indeed, the reverberation period of some cathedrals was as high as 6 or 7 secs. Many cathedrals, including Liverpool and Westminster and Bath Abbey, now had microphones installed; but, on the whole, the lecturer was inclined to agree with Wren, who said that "it seemed vain to make a church larger than that people could see or hear." Remedies for excessive reverberation were sounding boards of parabolic shape with the speaker's head coinciding with the focal point of the parabola; lowering the ceiling; and, lastly, by partitioning off parts of the church.

The lecturer then touched on some methods of sound-proofing rooms. The most important things to guard against were cracks, fissures, and ventilator openings. The walls then should be lined with a sound absorbent. Slag wool and asbestos wool mixed, balsam wool, a kind of quilted felt, a composition of sugar-cane fibre—these were all good—as were aerated plasters made with magnesia oxy-chloride. He referred to the prevalent system of stretched wires as a means of absorbing sound, and quoted Professor Sabine, who said that he "had never found an example where the system had proved any good." By far the best substance for stopping sound was ¼ in. steel plating. The lecturer concluded his address with a very ingenious demonstration by which he showed that the relative values of steel, of sugar-cane fibre composition, and felt for sound-proofing rooms were as 50 : 25 : 20 respectively.

College of Mines, Michigan, U.S.A.

We have received a copy of the "Bulletin," or "Year Book" of the Michigan College of Mines, which, situated at Houghton, in Upper Michigan, dates from 1886, and has a Faculty of distinguished scientists, of which Mr. William Otis Hotchkiss, B.S., Ph.D., is president. It is particularly fortunate in being situated in the heart of the copper country, while silver and many other metals also abound.

CONSTRUCTIONAL STEELWORK SIMPLY EXPLAINED.—XI

BY OSCAR FABER, O.B.E., D.Sc., M.Inst.C.E., etc.

[EDITORIAL NOTE.—*This series, which will be published in book form later, is intended to present the problem in so simple a form as to be readily understood by those having no special engineering training.*]

WE have now considered the technique underlying the calculation of the weight of flanges necessary to a girder. There is only one word of warning in connection with this before the student can apply what we have done to any practical case. This relates to the question of buckling of the compression flange. We shall see in greater detail later, when we come to consider stanchions—and it is indeed a matter of everyday experience observed by everyone—that beyond a certain limiting length, members in compression of great length are weaker than the same compression members shorter. A walking-stick, for example, will seldom carry the whole weight of a man on its full length, but a short section of walking-stick, say, 2 in. long, would carry many men. The upper flange of a girder is, as we have seen, simply a compression member, and the same considerations apply. It is fortunately prevented from buckling upwards by being connected throughout its length to the web, which is very stiff in this direction. But there is nothing to prevent its buckling horizontally. It is therefore necessary either to give the compression flange lateral support or, alternatively, to limit the stress in relation to its slenderness.

Most girders in the floors of buildings have their compression flange contained in a floor of reinforced concrete, which gives it the lateral stiffness required. In such cases the slenderness of the compression flange requires no reduction of stress.

But occasionally we come across examples of girders where no such side support is given, and such cases require very careful consideration. A bridge consisting of two girders, with the deck carried between them on the lower flange, would be an example of such a case.

The curve on Fig. 20 shows how such cases can be met by a reduction of stress in the compression flange, the curve showing the appropriate stress which is safe corresponding to various ratios of span to width of compression flange.

From what has been said it will be clear that this curve is not to be used where the compression flange is already supported laterally.

The L.C.C. Regulations (General Powers Act, 1909) dealt with it otherwise. They require, in Section VI: "Every girder shall be secured against buckling whenever the length of the girder exceeds thirty times the width of the compression flange." This means, presumably, that the full stress may be used right up to this limit, and beyond that the use of the girder is prohibited altogether. It would appear more rational to require some increase in strength before this limit is reached and to allow girders beyond this limit to be used, provided a correspondingly greater increase in strength is given, and the curve has this effect.

It will be seen that a girder with a 6-in. upper flange unsupported laterally would be stressed to 5½ tons per sq. in. if it were 12 ft. 6 in. long, 4½ tons per sq. in. if it were 17 ft. 6 in. long, and so on in proportion, the absolute limit of length for a 6-in. flange being 40 ft., and in any length beyond 20 ft. involve great loss of economy.

WEB STRESSES.—So far we have not dealt with the webs of beams or girders, but they form a very necessary part and are just as essential as the flanges.

In Fig. 21 is shown a cantilever in which a portion of the beam has been replaced by means of links *a b* and *c d*, the former

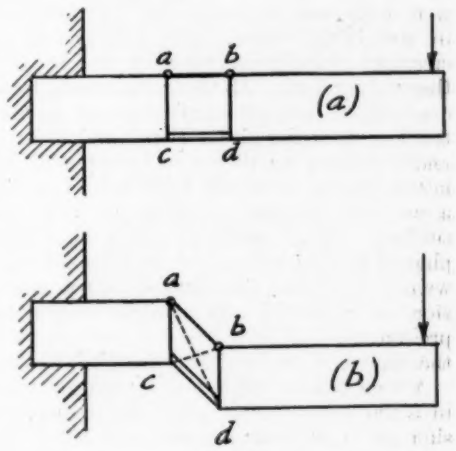


FIG. 21.

being, of course, in tension and the latter in compression. If no diagonal members are introduced the action of the load will be to lower the right-hand portion of the cantilever in a manner as shown in Fig. 21 (*b*). This shows that while the flanges *a b* and *c d* respectively are necessary, they are not sufficient to ensure the stability of the girder. If, however, the point *a* is attached to the point *d* by a diagonal member, or the point *b* to the point *c* by another diagonal member, then the lowering of the girder, as shown in Fig. 21 (*b*), will be prevented if these diagonals are made strong enough.

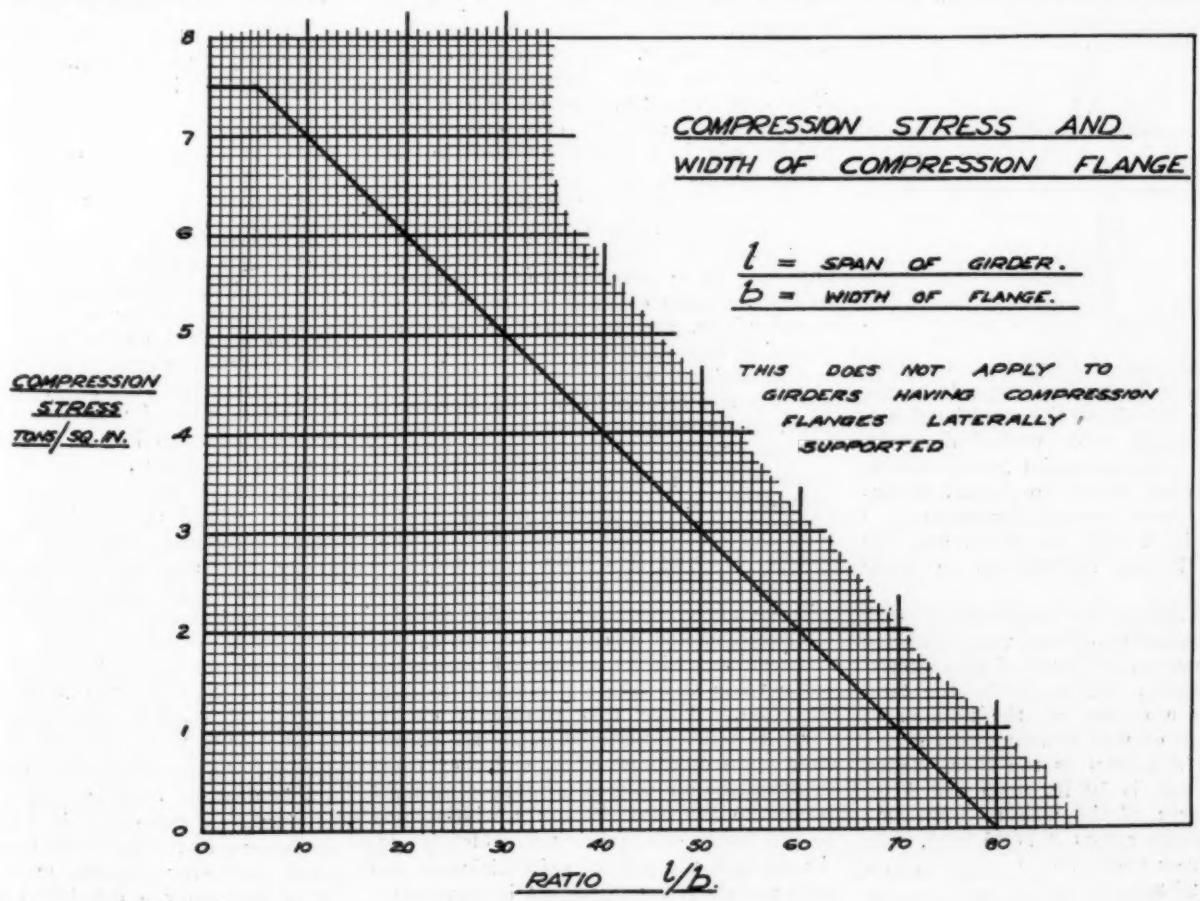


FIG. 20.

It will be seen that the length *a d* in Fig. 21 (*a*) has been increased by the dropping of the girder in Fig. 21 (*b*), while the length of *b c* in Fig. 21 (*a*) has been reduced in Fig. 21 (*b*) by the dropping of the girder.

Remembering that the stress which tends to lengthen a member is tension and the stress which tends to shorten it is compression, it is obvious that the stresses in the web of a girder consist of tension stresses in one diagonal direction and compression stresses in the other. The web system is therefore sometimes referred to as the diagonal system. If these diagonals take the form of isolated members, such as *a d* and *b c*, then the girder is referred to as a lattice girder; but they may be replaced by a web plate, in which case this plate is subject to diagonal stresses, already explained. It is therefore clear that the webs of girders are subject to diagonal tension in one direction and diagonal compression approximately at right angles to the tension.

Although it can be shown that the stresses in a web can be explained by simply tension and compression, they are frequently referred to as shear stresses, and this conception is convenient from some points of view.

If a piece of material, as in Fig. 22 (*b*), is put into a pair of shears, it will be cut by the left-hand portion being forced up and the right-hand portion down. This is referred to as a shearing action, and plates are cut in this way by large machines in a steelworks, referred to as shearing machines. If a girder section such as that shown in Fig. 22 (*a*) is considered, it

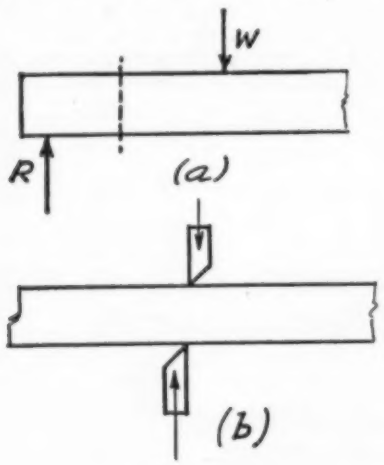


FIG. 22.

will be clear that the girder left of the section tends to be pushed upwards by the reaction R relatively to the right-hand section, which tends to be pushed down by the force W. The material in the section has to be strong enough to resist this tendency, and hence the web, by analogy, is said to be in a state of shear, and the stresses in it are referred to as shear stresses.

It can be shown by experimental work that the resistance to shear varies directly with the cross-sectional area of the material subject to shear. If we divide the total shear across a section by the number of square inches of web resisting this shear, the product is known as the shear stress. Thus, if a web is 10 in. deep and $\frac{1}{2}$ in. thick, the area of the web is 5 sq. in.; and if the shear across it is 25 tons, then the shear stress would be

$$S = \frac{S}{A} = \frac{25 \text{ tons}}{5 \text{ sq. inches}} = 5 \text{ tons per sq. inch.}$$

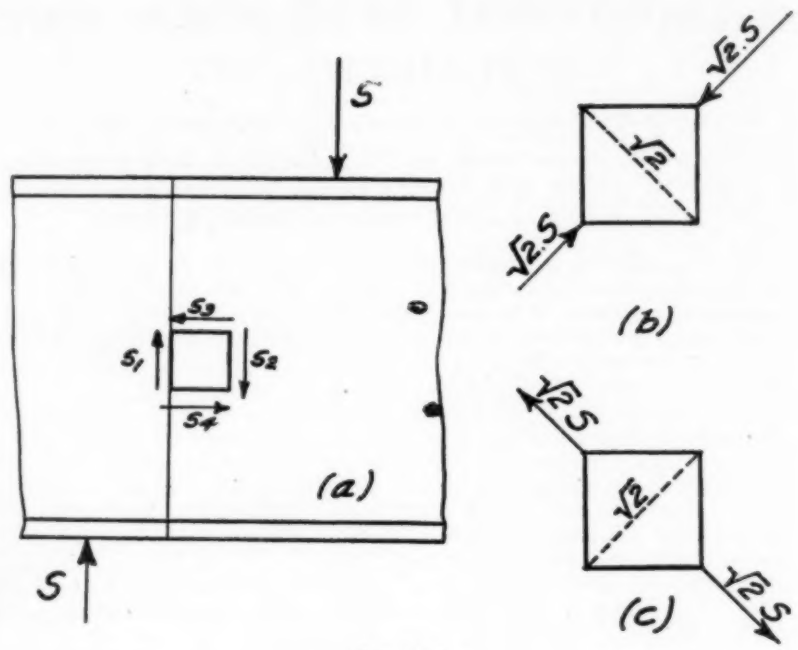


FIG. 23.

Let us now consider the web shown in Fig. 23 (*a*).

The total shear S is resisted by the total web. Therefore 1 in. of web in height would resist a portion of it. If we imagine for simplicity that the web is 1 in. thick, then the portion resisted in 1 in. heig would be the shear per sq. inch. This is arrived at by dividing the total shear by the area of the web.

Let us consider a little square of material, having length of side equal to 1 in. The two vertical faces are subject to little shearing forces, equal to s_1 s_2, this being the shear stress in the web. If these were the only two forces acting on the square, it is obvious that they would set it into rotation in a clockwise direction, which, of course, we know from experience does not actually occur. It is therefore obvious that there are other forces acting on this little unit of material to prevent it from such rotation, and the only other forces which could have this effect are the horizontal forces s_3 and s_4 indicated in the diagram. To prevent rotation, not only must they be in the direction shown, but they must be equal in magnitude to s_1 and s_2. These forces s_3 and s_4 obviously indicate a state of shear stress in a horizontal plane, and we therefore have the following important law :—

Any material subject to a vertical shear stress is also subject to an equal horizontal shear stress only.

The existence of this horizontal shear stress will be made clear later.

These four unit forces acting on our small square of material can now be combined. We may first combine s_3 and s_2 to produce a diagonal resultant whose value will be $\sqrt{2}.s$, as shown in Fig. 23 (*b*); similarly, s_1 and s_4 can be combined, and the resultant will be a diagonal having the same value as before and opposite to it in direction. These two resultants clearly serve to put the material inside the square in a state of compression, and they exert compression on an area of material at right angles to the force having a width equal to the length of the diagonal, which is $\sqrt{2}$. As we took the web of unit thickness, the area on which the forces act is therefore

$\sqrt{2}$ sq. inches.

The compression stress is therefore

$$c = \frac{\sqrt{2}\,s}{\sqrt{2}} = s$$

Our elemental forces can be combined in another way. We can combine s_1 with s_3 to form a resultant in a diagonal direction, having the magnitude of

$\sqrt{2}\ s$ (see Fig. 23 (*c*)),

and similarly s_2 and s_4 can be combined to form a resultant in the same line but opposite to the previous one. These resultants obviously produce tension across the diagonal of the square whose area is $\sqrt{2}$ in the one direction and unity in the other, and therefore has an area of $\sqrt{2}$ sq. inches, so that the tension stress on the other diagonal is

$$t = \frac{\sqrt{2}\,s}{\sqrt{2}} = s$$

This shows *that a vertical shear stress necessitates an equal horizontal shear stress, and that these can be combined to produce diagonal compression at* 45° *and diagonal tension at right angles to it, the tension and compression stresses being equal to the shear stresses.* This is an extremely important result and very much facilitates a proper understanding of what goes on in the web of a girder.

With webs such as are common in steel girders, where the thickness is generally small compared with the depth, it is pretty clear that failure will occur by the steel buckling under the compression stress at 45°, and this is, in fact, how such webs fail.

In a reinforced concrete beam, however, owing to the fact that concrete is much weaker in tension than in compression, coupled with the fact that the ordinary proportions of a concrete beam involve so great a thickness as compared with the depth as would preclude any idea of buckling, the beam will fail by tension on a diagonal plane producing diagonal cracks, and this is, in fact, how a concrete beam fails in shear.

SPECIFICATIONS.—XLV

BY H. V. MILNES EMERSON, A.R.I.B.A.

GLAZIER.

GLASS used in buildings is a mixture of pure sand, soda, chalk and a proportion of broken glass, &c., melted together at a high temperature and made in convenient forms for use.

Crown and sheet glass are the same in respect of composition, of which the following is an example :—Sand 100, sulphate of soda 40 to 45, chalk or limestone 40, powdered anthracite coal 2, broken glass or cullet 100, and small quantities of bleaching or oxidising agents, added as required. Plate glass only differs from the foregoing in that the proportion of lime is usually less and the materials are more carefully selected in regard to purity.

Crown glass is made in large circular discs and much waste is caused by cutting these into rectangular pieces, and by the thickened lump or bull's-eye in the centre. At one time these bull's-eye pieces were used for inferior work, such as stables, cellars, &c., but they are now used in large quantities in present-day domestic buildings. The manufacture of crown glass is as follows :—The workman dips his iron blowpipe two or three times into the pot, thus gathering on the end about 10 lbs. of molten glass. This lengthens into a bulb by its own weight when held upright. Rolling this on a marver, the workman makes the outer portion conical and then, by blowing, the bulb is formed into a pear shape. Alternate heating and blowing forms it into a flattened sphere, increased in size and with a point called the bullion point. This later becomes the bull's-eye. The glass is now transferred from the blowing pipe and a lump of hot iron metal (ponty) in the form of a little cup is pressed against the bullion point of the flattened sphere, to which it becomes firmly attached. The globe of glass, now held with the ponty, is transferred to the nose hole and the opening formed by the blow-pipe is softened by being presented to the action of the furnace. The sphere is now taken to the flashing furnace and is kept continually revolving by turning the ponty on a rest in front of the furnace opening. The revolutions which are gradually accelerated as the softening of the glass takes place, throws the edges of the orifice outwards by centrifugal force until the glass becomes perfectly flat, and of practically equal thickness with the exception of the bull's-eye. The flashing is now complete, and after being detached from the ponty, the disc is taken to the annealing oven, where it remains until cold.

When the glass is placed in the annealing oven it remains at a temperature somewhat below that required to soften glass, and when the oven is completely filled, the temperature is allowed gradually to decline until the whole is cold. This process is important in the manufacture of all kinds of glass, as glass is very fragile when newly made. The molecules are under a strain caused by the outside portion of the glass cooling much quicker than the inner, but this is to a great extent rectified by annealing it, and a proper strength is acquired.

The area of squares or panes that can be produced from the flat disc (or table) of glass varies according to requirements. After the removal of the centre pane or bull's-eye, which varies from 5 to 10 in. square, the remainder of the table can be cut to advantageous sizes to produce a maximum quantity of about 13 ft. super; but if the panes are cut as required, the maximum will be 10 or 11 ft. super. The largest squares produced are about 33in. by 25 in. The portion containing the bull's-eye (or bullion) cannot be flattened, but the remainder can be flattened to correct the slight convexity that exists in the tables. Crown glass is made in six qualities—A, B, Best, Seconds, Thirds and Fourths, and in two thicknesses, the usual, about $\frac{1}{26}$ in. thick, weighing about 10 oz. per sq. ft. and the extra about $\frac{1}{13}$ in. thick, and weighing some 16 oz. per sq. ft. A and B are picture qualities, and the remainder glazing qualities. The glass should be flattened, otherwise the curvature often necessitates cutting the sash bars or using a large quantity of putty.

Crown glass is said to be more free from colour than sheet glass, and it has a finer surface.

Sheet glass has now almost entirely displaced crown glass for glazing purposes. Sheet is made quite differently from crown glass, inasmuch as a long and perfect cylinder is sought to be produced by the blower instead of a sphere of glass. Very much larger sheets can be obtained by this method; the form is rectangular, and there is no lump in the centre. The workman, having made his gathering on the end of his blow-pipe, forms it into a cylindrical mass of the diameter required by blowing and turning it in the cavity of a wood or metal block. By alternate blowing, swinging and heating, the cylinder is elongated until it reaches its maximum size and thickness to admit of sheets of the required size being made from it. The sealed end of the cylinder is now heated at the furnace, and the enclosed air, which is prevented from escaping by closing the end of the blow-pipe, becomes rarified and bursts the soft end. The workman quickly turns the cylinder still with its end in the fire, and the softened edges of the opening, which at first are curved inwards, are flashed out until they are in a straight line with the surface of the cylinder. The ends of the cylinder are then cut off and the finished cylinder is split open by a diamond. It is then taken to the flattening kiln, where it is laid with the split side upwards on a flattening stone, generally covered with a sheet of glass to protect the cylinder from the irregularities of its surface. The glass is now softened, and the workman opens the two edges of the cut, the sheet then falling flat on the stone. It is now gently rubbed with an implement to produce a smooth surface, and then transferred to the annealing chamber. When the annealing oven is filled, it is closed up so that it may be free from draughts and allowed to cool very gradually, the period varying from three to five days. In annealing chambers, where the sheets are passed through one at the time, the single sheet cools very rapidly, and at the end of about half-an-hour will be thoroughly annealed.

The qualities of sheet glass are as follows, and may be used for the purposes mentioned :—

A—Best picture.
B—Ordinary picture.
Best—Best glazing.
Seconds—Good glazing.
Thirds—Ordinary glazing.
Fourths—Rough work, unfit for most purposes.

The following are the weights and thickness of glass made :—

15 oz.	averages	$\frac{1}{15}$	of an inch thick.
16 oz.	,,	$\frac{1}{15}$	,, ,,
21 oz.	,,	$\frac{1}{10}$	,, ,,
26 oz.	,,	$\frac{1}{9}$	,, ,,
32 oz.	,,	$\frac{1}{7}$	,, ,,
36 oz.	,,	$\frac{1}{6}$	,, ,,
42 oz.	,,	$\frac{1}{5}$	,, ,,

Every $\frac{1}{16}$ in. is equal to 13 oz. weight per sq. ft.

The largest sizes which, for all practical purposes, are as follows;:—

Weight in ozs. per foot super.	Maximum length in inches.	Maximum width in inches.	Maximum area in superfiicial feet.
15	55	38	13
21	85	49	22
26	85	49	22
32	85	49	22
36	70	44	19
42	70	44	19

The usual stock sizes of sheet glass are from 48 in. by 34 in. to 50 in. by 36 in. Sizes above these can be obtained at extra cost.

For general use squares should not exceed the following sizes :—

15 oz. 24 in. by 24 in. 26 oz. 36 in. by 36 in.
21 oz. 30 in. by 30 in. 32 oz. 40 in. by 40 in.

The length or the width may be increased, provided the area does not exceed the foregoing.

Sheet glass has a surface somewhat duller than crown glass, but it can be made thicker and in larger sheets.

Fluted sheet glass is of a wavy section, having corrugations on one or both sides, and can be obtained with wide or narrow corrugations. This glass can be used where privacy is required without the loss of light offered by obscured glass.

Rolled sheet glass is a semi-transparent glass suitable for factories, greenhouses, &c. Rolled sheet glass can also be obtained with various patterns impressed in same, such as the Flemish, Arctic, Muraneze, &c.

Plate glass is made by pouring white-hot glass on to an iron table about 30 ft. long by 10 to 20 ft. wide. The molten glass is spread evenly on the table by means of a heavy metal roller running upon strips of steel placed on either side of the table. These metal strips are a little thicker than the finished thickness of the plate and by their distance apart regulate the width of the plate.

After the plates are annealed they are first ground with sand and water with a rubbing plate of cast-iron. When the greater portion of the rough surface is removed the process is completed by using coarse powdered emery. The smoothing process is completed by means of rubbing one sheet of glass against the other with fine emery powder and water between same. When this operation has been completed the plate is removed and firmly embedded on a table moving backwards and forwards horizontally. Fixed above this table are the polishers, revolving buffers covered with felt, which rub the plate as it passes backwards and forwards, the surface of the glass being supplied with water and very fine oxide of iron.

The surface of the plate after being cast can be polished, left rough, or indented by a pattern cut upon the surface of the table. These treatments are termed polished plate, rough-cast plate, or rolled plate.

There is a great difference in the quality of polished plate glass supplied by different manufacturers. Not only may there be air cavities and other defects that can be readily seen, but sometimes the transparency of the whole plate is impaired. Such a plate will take on a peculiar dimness a few days after being cleaned, while a perfect plate will remain quite clear and transparent for many weeks.

Great care must be taken in the selection of the materials. The following may be taken as an average of the materials used, but many manufacturers have their own special receipt :—Fine sand 100, refined sulphate of soda 42, carbon in powder $2\frac{1}{2}$, carbonate of lime 20 to 25, arsenic $\frac{1}{4}$, and cullet or broken plate glass as required.

Polished plate of ordinary glazing quality is about $\frac{1}{4}$ in. thick and can be obtained in various sizes up to area of 200 ft. with an extreme length of not more than 16 ft. 8 in. It can also be obtained in various thicknesses from $\frac{1}{8}$ in. to $1\frac{1}{2}$ in.

Patent plate is sheet glass polished both sides and can be obtained in thicknesses from $\frac{1}{16}$ in. to $\frac{1}{8}$ in. It is as costly as $\frac{1}{4}$ in. polished plate, but not so costly as $\frac{1}{4}$ in. polished plate and is used for cabinet and picture work, also for glazing small squares in windows where a clear view and light weight are required.

Rolled plate is made from $\frac{1}{4}$ in. to $\frac{3}{4}$ in. in thickness, and is used in openings where clear glass is unnecessary.

Wired rolled glass can be obtained both rough and polished and is used in skylights or other positions where the glass is likely to become broken. The wire netting embedded in the glass prevents the glass from falling when broken and is practically fire, weather and burglar proof.

Triplex glass consists of two sheets of glass with a layer of transparent xylonite between. It is indistinguishable from ordinary plate glass in appearance. It will crack but is practically unbreakable, and is airtight, watertight, fire-resisting and burglar proof.

Cathedral glass is rolled or sheet glass of a neutral tint used generally for ecclesiastical work. It can also be obtained in all tints and colours for leaded lights, &c.

Ground glass has one side with a ground surface and is not transparent.

Embossed glass is obscured in parts to pattern. The surface not to be embossed is covered with Brunswick black. Fluoric acid is then poured on and eats into the unprotected parts of the glass and produces the obscured or embossed pattern required.

Coloured glass is made in every variety of tint by adding metallic oxides &c., to the materials before fusion.

Flashed colours are those in which the plain sheet is covered on one side only with a thin layer or veneer of coloured glass. The two layers are "gathered" from different pots on the blowing iron and blown out together in one sheet. Designs can be obtained by removing with fluoric acid the coloured parts not required.

When the colour is all through the body of glass it is termed pot-metal. Special kinds of glass are made for painted or stained glass windows and other work of an artistic kind.

Glass tiles and slates are made both in rough plate and sheet glass, the former being from ¼ in. to ½ in. thick and the latter from 16 oz. to 32 oz. They are made plain, fluted, or to any shape required and can be worked in with the roof covering to admit light without the expense of skylights, &c.

The effect of various kinds of glass on the diminution of light is as follows:—

Polished plate ¼ in. thick intercepts 13 per cent. of light.

Figured rolled plate intercepts 15 to 30 per cent. of light.

Rough-cast plate, intercepts 30 per cent. of light.

Do., rolled, four flutes to 1 in., intercepts 53 per cent. of light.

Sheet glass intercepts 22 per cent. of light.

INCORPORATED CHURCH BUILDING SOCIETY

At a meeting of the Incorporated Church Building Society, held at 7, Queen Anne's Gate, Westminster, on November 18, the Hon. Sir E. P. Thesiger, K.C.B., in the chair, grants were made towards building new churches at Bournemouth, St. Mary, £500; Castleford, St. Michael (Yorks), £100; Fairbourne, St. Cynon (Merionethshire), £150; Indian Queens, St. Francis (Cornwall), £75. Towards rebuilding the church at Withycombe Raleigh, St. John-in-the-Wilderness, £75. Towards enlarging or repairing the churches at Bradoc, St. Mary (Cornwall), £25; Clynnog Fawr, St. Beuno (Carnarvonshire), £50; Cooling, St. James-the-Great, £50; Deeping, West, St. Andrew, £40; Ewhurst, St. James, £30; Islington, All Saints, £50; Islington, St. Matthew, £100; Westminster, St. Mary (Graham-street), £50. From the Mission Buildings Fund a grant of £5 was made towards repairing Buckshead Mission Church, Truro. The following grants were also paid for works completed at Barnt Green, St. Andrew, £50; Brabourne, St. Mary, £50; Castleton, SS. Michael and George, £150; Dingley, All Saints, £15; Easton Maudit, SS. Peter and Paul, £40; Elson, St. Thomas, £15; Friezland, Christ Church, £150; Golborne, St. Thomas, £75; Grimscar, St. Cuthbert, £400; Halsall, St. Aidan, £60; Hesketh, All Saints, £400; Horndon-on-the-Hill, St. Peter, £30; Hull, St. Mark, £30; Kettering, St. Andrew, £170; Killay, St. Hilary, £250; Morwenstow, St. John-the-Baptist, £40; Mylor, All Saints, £25; Newcastle Emlyn, Holy Trinity, £150; Peasmarsh, SS. Peter and Paul, £50; Pennington-in-Furness, St. Michael, £100; Puriton, St. Michael and All Angels, £20; Sotby, St. Peter, £30; Trent, St. Andrew, £30; Welling, St. John, £300; Wembley, St. Augustine, £300; Wickham East, St. Michael, £30. In addition to the above, the sum of £1,244 was paid towards repairs to 38 churches from Trust Funds held by the Society. With this meeting the Committee have granted nearly £9,000 this year towards church extension and repair in England and Wales. The Society, being dependent upon voluntary contributions, urgently needs more generous support from churchpeople to enable it to continue and extend its work.

ROMAN TOWN PLANNING

In the course of a lecture on "Roman Town Planning," at the opening meeting of the Edinburgh and South-Eastern Classical Association at Edinburgh University, Professor Gerard Baldwin Brown defined town planning as the considered arrangement of groups of human habitations in the interests of convenience, health, and amenity. In the vast majority of cases, such groups had not been arranged on any considered plan, but had grown up naturally, each on its own, and the result had sometimes been quite a happy one, but at other times decidedly the contrary. In ancient Rome, the small area of the Forum, where every kind of business had to be carried on, resulted in great inconvenience, and Julius Cæsar began the plan, followed by subsequent emperors, of buying up property round the Forum, so as to provide new spaces that would relieve the pressure. Such was the origin of the Imperial Fora, well-meant but badly executed schemes of considered town planning. Open areas were indeed provided, but they were each surrounded by high walls, and there could have been no sense of openness and space. The explanation was that these new Fora were copied from the market places of later Greek or Hellenistic cities, which had that character, and this introduced the question of these cities in general, the influence of which, first on Roman, and then, through Roman, on more modern town planning, had been very great. The Hellenistic cities had been built on the ancient Oriental rectilinear or "grid-iron" scheme, the history of which and the place therein of Hippodamus of Miletus, a contemporary of Pericles, the lecturer explained. The scheme, he said, was taken over by the Romans for their camps and colonies, and gave the familiar four streets meeting squarely in the centre of the town, where was an open space or Forum. Innumerable modern European cities had beneath them a Roman plan of the kind, but it was very remarkable that in hardly any example had the central open space survived. Almost the only conspicuous instance was Rouen. The best feature in the Roman plan was in this way lost

TALL CITY BUILDINGS

At a livery dinner of the Worshipful Company of Carpenters, at Carpenters' Hall, Throgmorton-avenue, recently, The Master, Mr. H. Westbury Preston, in proposing the toast of "The Lord Mayor, the Sheriffs, and the Corporation of the City of London," suggested that something in the nature of a "general staff" was needed to advise the Corporation. At the present time he frankly admitted he was appalled at what was going on in the City with regard to the height of the buildings now being erected. He knew that the City had to work under a twenty-two-year-old Act of Parliament, and, if his recollection served him well, when the County Council promoted that measure they sought to have the height of buildings restricted in some way in proportion to the width of the road. Unfortunately that provision was not passed by Parliament, and now they saw in that much-misnamed Old Broad-street houses in the narrowest part rising 80 ft., with some 30 ft. or 40 ft. of mansard roof rising above that. He was told that whereas before the war owners of property were careful lest they interfered with light and air, there was an understanding in Old Broad-street that they would all go to the full 80 ft. Just think what that would mean in that narrow street. They would never get air or sunlight except when the sun was at the meridian, and the health of their future citizens would unquestionably be seriously interfered with. The matter seemed to need more attention than it had so far received, for if something was not done quickly they would have a miniature New York in the very heart of the City. He hoped such a thing as that would never happen.

The death has occurred at Exeter, at the age of 60, of Mr. Edward Mudge, builder and contractor.

L.C.C. ANNUAL REPORT

The annual report of the Council (1925) has now been published, price 1s., and is obtainable from any bookseller or from P. S. King & Son, Ltd., 14, Great Smith-street, S.W. 1. The report contains an excellent criticism of the Elementary Schools of London by Mr. P. B. Ballard, M.A., D.Litt., the District Inspector of the L.C.C. He draws a comparison between the Council schools and the non-provided or denominational schools. He says: "The Council schools themselves 'date' as plainly as old photographs. One can tell at a glance to which period they belong. To the first period belong the plain brick buildings, with an exterior that was not without dignity and even comeliness, but an interior which was ill-fitted for the orderly pursuit of school studies, as we conceive them to-day. For the premises were arranged on the principle that classrooms (large ones) were all that was essential in a school structure. Neither a hall nor a staff room was deemed necessary. Even corridor space was restricted. To arrive at room C one had to pass through room A and room B. Then came a period when the value of a hall was realised, and even emphasised. Schools of this middle period were built on a generous scale, with large halls, large class-rooms, large playgrounds (where possible), and an imposing frontage. The architecture was more obviously Victorian. There was always an attempt to make the buildings look less bare and less desolate. Finally there are the modern schools where a return has been made to a severe and simple style. Here everything is sacrificed to utility and comfort. The classrooms are small enough to make large classes impossible. The hall is large enough to hold the whole school, but with no space to spare. Head teacher's room, staff room, medical inspection room, practical work-room—all that modern schooling demands is there, and there for actual use. And in spite of the absence of ornament (perhaps indeed because of it) it achieves a charm which the buildings of the middle period flagrantly lacked."

A WORLD-FAMOUS MONUMENT

Sir Banister Fletcher, V.-P.R.I.B.A., in his lecture on the Parthenon, Athens, on Wednesday, November 24, at the Central School of Arts and Crafts, reviewed the historical events and the final victories of the Greeks over the Persians, 480 B.C., which led to the building of this world-famous temple. Pericles, the great administrator, determined to give material expression to the national exultation by erecting a votive temple to the champion goddess, Athena, who had given them the victory, and architecture and sculpture were called to the service of the State. The Acropolis rock at Athens, no longer wanted as a military fortress, became the enclosure sacred to the gods.

The lecturer referred to the fine gleaming marble, from which it is possible to call forth the delicate and exact forms so specially characteristic of this most marvellous of all Doric temples. Thus could architects and sculptors create the harmony and symmetry of design in column and architrave, roof and pediment, moulding and ornament, frieze and metope, colour and sculpture which go to the making of the Parthenon.

By the aid of very interesting lantern views the lecturer described the details of the delicately-carved frieze of the Panathenaic procession, which vibrates with Athenian life, a ceremony vividly brought to mind by this sculptured panorama, which gives added value to this historic building, whose ruins now speak but dimly of its former glory.

Pontypool's £100,000 Scheme.

Pontypool Urban District Council has decided to promote a Bill in the next session of Parliament for local improvements, including the widening of George-street, which are estimated to cost £100,000.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

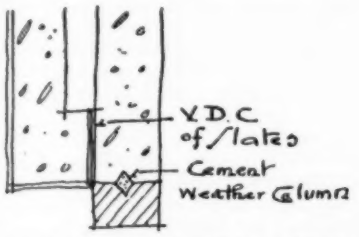
We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting!—ED.

Damp Concrete Block Walls.

[REPLY TO "CONCRETE BLOCKS," NOVEMBER 19.]

SIR,—The houses mentioned seem to be in a very exposed position. I would suggest that the whole of the windows and doors on the exposed side of the house be taken out, and the walls around them be re-built with a vertical damp course of slates in cement, as shown in accompanying sketch, and the frames be built



in flush with the external wall face. The frames could also be grooved, and a corresponding groove cut in the wall, the cavity so formed being filled in with neat cement. If, however, the question of cost renders this scheme impracticable, the walls could be rough-cast with a mixture of sand and a waterproofing cement, and the frames grooved to receive this. Alternatively a cheaper method would be to wash the wall round the openings with a solution, which might effect a cure.

MEMBER OF A.A.S.T.A.

Span of Tiled Roof.

[REPLY TO "G. E. W.," NOVEMBER 19.]

SIR,—A rough and ready rule I have used with general satisfaction is that to deduct 1 in. off the depth of the common rafter and to multiply the balance by four, gives the total maximum span for that depth of rafter, *e.g.*, the total span of the roof on plan, not the span of the rafter on one side of the pitch measured on the slope. By this rule a 7 in. by 2 in. common rafter would serve a roof spanning 24 ft., without purlins, and deeper rafters correspondingly greater spans, but it is a fact in practice that very rarely is it an economy to save purlins or trusses by using deeper rafters than 4 in. Where necessary very economical trusses can be knocked together by grouping pairs of slightly stouter common rafters gripping a stout collar, upon which a purlin may be rested.

FEATHERWEIGHT.

Ancient Method of Splitting Stone.

[REPLY TO "THOMAS," NOVEMBER 26.]

SIR,—I question if good solid granite could be efficiently split by wooden wedges, but I have heard from old masons that it used to be common practice to split softer stones thus. I understand that the wedges, which might have been oak, but which I expect were of some more absorbent wood, were driven in rows into holes prepared for them, and were then thoroughly soaked with water. The expansion of the wood forced the stone away. I think this method was used mostly for taking off large blocks from the bed in quarries; it would be rather a slow method of splitting small stones.

MOOR.

Damp Wall.

SIR,—The flank end wall of a back addition is in 9 in. ordinary work and lately the rain has penetrated through the plaster. What is the best remedy for this defect? CURE.

Extending Sewer.

SIR,—We are laying out a new street, about 800 ft. long, which is an extension of an existing street, made up and taken over, for the purpose of building subsidy houses in a municipal borough. Is it the duty of the local authority to extend the sewer to drain these houses, or must we do it at our own expense?

DRAINS.

Sash Window Construction.

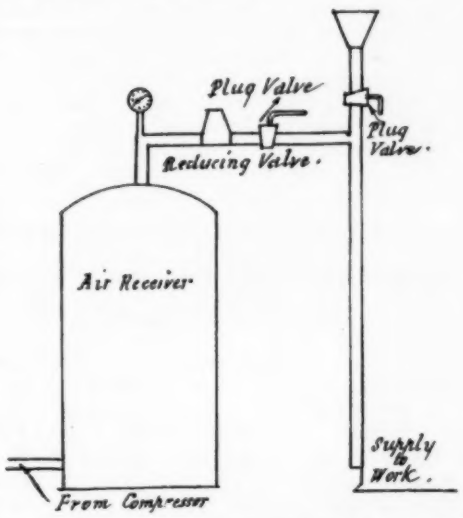
[REPLY TO "PROPORTION," NOVEMBER 19.]

SIR,—A good method of overcoming the difficulty described by your correspondent is to form a deep boxing in the head of the frame sufficient to receive the depth of one pane of glass. The cavity leading into this boxing is closed by a loose board rounded on all edges so as not to bind. The deeper sash can then be raised so as to pass into the cavity carrying the loose board up with it. When the sash is lowered the board passes down into its place to preserve a neat finish at the top.

TRI.

Pressure Grouting Machine.

SIR,—Would you please inform me whether it would be possible to rig up a pressure grouting machine to give satisfactory results for filling a hollow wall with grout. The height of wall is 40 ft. I have available an air compressor and an air receiver, several 1¼ in. plug valves, a reducing valve, pressure gauge, and necessary piping, and think it should be possible to fix up such a machine with the above materials, but I am not quite clear as to the method of working. The points I am not clear about are the feeding of the grout into the work and the charging of the machine.



Could you suggest any arrangement similar to the attached sketch which would give good results. Should the grout be fed into the air-receiver, poured straight down the pipe into the work, and then the air turned on, or is a separate container required for it? What would you suggest as a suitable pressure to work at?

A. J. HARRIS.

Sound-proofing Floor.

SIR,—I am proposing to sound-proof the boarded floor of an existing room, 14 ft. by 9 ft.; joists are 7 in. by 2 in., 14 in. centres, and support a plastered ceiling beneath. I propose to lay ½ in. fibre board on fillets nailed between the joists and 4 in. below the top of latter, and pack silicate cotton 2 in. thick over this. Before proceeding, however, I should like to have the benefit of the experience of any of your readers who have successfully dealt with a similar case, or who have alternate suggestions to offer.

PUGGING.

Condensation, &c.

SIR—I have recently erected a house of 9 in. brickwork rendered and set externally in cement mortar with an admixture of waterproofing powder, and with ordinary lime plaster internally. On the chimney breast internally and immediately under the lead gutter I continually find beads of moisture, similar to perspiration, which do not, however, run down the face of plastering. The stack is not exposed, but the flue is terminated with a pot, which eliminates the possibility of moisture settling on the flue internally. I have recently had the gutter with apron flashings relaid under supervision, but the nuisance still remains.

In another part of the building, which is of 9 in. brickwork, and rendered and set externally with a finishing coat of dry roughcast, I find in very wet weather that the outlines of brickwork joints are clearly visible on the plaster internally. That this is dampness I am convinced, and I am wondering whether any reader would kindly give me the benefit of his assistance regarding cures.

HADYN M. R. BURGESS.

Daywork Rates.

[REPLY TO "NOVICE," NOVEMBER 19.]

SIR,—In a building contract it is usual to make provision for the ordering by the architect of "extras," as and by way of variations on the contract, the rate of payment being provided for in a schedule of prices, or at rates fixed by the architect. If, therefore, an architect, acting within the scope of his authority under the contract, has ordered variations and no rates have been fixed for payment, the contractor is, in any case, only entitled to be paid a fair and reasonable value for the extra work done, and the price of the work done need not bear any relation to the original contract price.

In this instance it is stated the architect has determined that the work is to be paid for on daywork rates, but has not determined what those rates shall be. He need not necessarily accept those of the local Federation of Master Builders, for he is only concerned in allowing fair and reasonable rates. There is no doubt, however, they would form an acceptable basis on which to adjust the payment for "extras" since it is well known they have been compiled in the various districts and agreed by those most concerned in these matters, and that the court or an arbitrator allows them.

LEGAL.

Publication Wanted.

SIR,—Can any reader oblige me with a copy of "Sand, Lime and Other Concrete Bricks"? Issued by H.M. Stationery Office, it is now out of print. I would pay one shilling for a copy.

WIT.

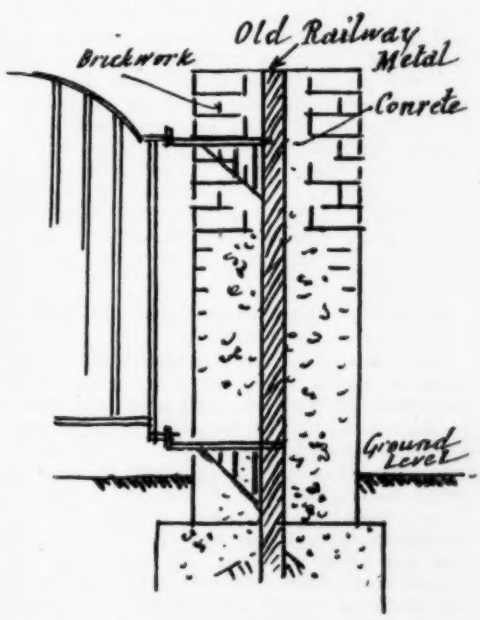
Cement Pointing.

SIR,—Can you give me a suitable specification for the pointing of brickwork in cement, with a white joint? Cost is a consideration.

BRICKWORK.

Gate Piers.

SIR—I have noticed that brick gate piers for boundary fences have a tendency to crack and get out of plumb. I enclose a sketch which



I think should be of some use in remedying such trouble. The rail or "H" iron goes well into the ground.

J. A.

THE BUILDING TRADE

WORKMEN'S COMPENSATION.

A BILL has been introduced, and has passed all its stages in the House of Commons without opposition, to remedy a hardship which occurred under the Workmen's Compensation Act, 1923, section 24, subsection (6), which is now section 11, subsection (2), of the Consolidating Act, 1925. In the principal Act of 1906, paragraph (16) of the First Schedule, there was a provision enabling workmen who sustained injury by accident when under 21 years of age, to apply for a review of the weekly payments, and on that review the payments might be increased " to any amount not exceeding 50 per cent. of the weekly sum which the workman would probably have been earning at the date of the review if he had remained uninjured," but such sum was not in any case to exceed £1. To come within the provision in this paragraph the review had to take place more than twelve months after the accident.

In 1923 the above proviso to the paragraph was amended, and it was provided that the amount of the payment may be increased to such an amount as would have been awarded if the workman had at the time of the accident been earning the weekly sum he would probably have been earning at the date of the review if he had remained uninjured; but to come within this provision the review had to take place " more than six months after the accident and before the workman attains the age of 21 years."

In the eleventh article we published on Workmen's Compensation (April 2 last) we explained the difficulty this had caused in connection with the case, Briggs *v.* Thomas Dryden (1925, 2 K.B. 667; *The Builder*, August 28, 1925), where owing to the circumstances of the case the review could not take place " before the workmen attained 21 years," and it was contended that he was practically without remedy, as the provision in the principal Act had been repealed by the subsection substituted for it, and he did not come within the terms of the new subsection, being at the date of the review more than 21 years of age. The Court in that case, however, held he possessed an accrued right to claim compensation under the Act in force at the date of the accident.

The Bill now passing through Parliament amends section 11, subsection (2), of the Workmen's Compensation Act, 1925, for the first part of the subsection is amended to read as follows: " Where the workman was at the date of the accident under 21 years of age and the review takes place more than six months after the accident and the application for the review is made before *or within six months after* the workman attains the age of twenty-one years," then the subsection is to apply. We have italicised the new words introduced, which, it will be seen, give the workman six months' grace in which to apply for a review of the compensation he is receiving.

Workmen's Compensation and the Coal Stoppage.

Three cases have recently been heard in the Court of Appeal which raised the same question—whether men who had been injured by accident and who had been offered light work by the employers were entitled to compensation when that light work came to an end owing to the stoppage in the coal industry. These cases are reported in the *Times*, November 25, but only the facts in the first case are given in detail. In that case the injured man, when employed as a banksman, had sustained injury by accident on December 21, 1925. He had partially recovered but was unable to resume his former class of employment, and his employers, in whose service he had been for forty years, found him light work as a signaller above ground at wages which closely approximated those he had been earning before his accident. After he had performed this duty for a week, the stoppage in the coal trade occurred, and the report states " the employers were obliged to discontinue the employment." It also appears that the man had no wish to give up his work. The man had applied for compensation as being partially disabled, and the County Court Judge had found that he was still partially disabled and entitled to compensation, and the fact that the employers could not keep the pits open was a misfortune to them but did not alter the fact that the man could only do certain kinds of work and that he had lost his employment through no fault of his own, and he was awarded 18s. a week. The Court of Appeal affirmed this decision, but it is to be noted that the decision was based on the ground that there had been no refusal to work, nor were there any supervening factors which were attributable to the workman which had prevented the employers from being able to mitigate the right to compensation given by the Act.

On the facts as so stated the case is a clear one, and we refrain from discussing what the law would be if supervening facts attributable to the workman or the action of his trade union, as in Williams *v.* Oakwood Colliery Company (18 B.W. C.C. 151) had intervened until the case is more fully reported.

The stoppage in the coal trade was preceded by a general strike, and in some cases this may have an important bearing as involving intervention on the part of the trade unions. In the report at present available there is only mention of a " coal strike," but as we have recently pointed out, apart from the general strike, this seems a misnomer in the case of the dispute in the coal mines. When we have had the advantage of seeing the above cases fully reported they may be of assistance to us in discussing the law in the abstract in relation to Workmen's Compensation and the general strike and other disputes.

Lead Paint (Protection against Poisoning) Bill.

LAST week saw the final stages in the House of Lords of this Bill, in which the Government have adopted the policy of Regulations for the prevention of lead-poisoning among house-painters, instead of the prohibition of the use of lead-painting for interiors which was proposed by the International Labour Conference of Geneva, 1921. No alterations of substance were made in the passage of the Bill through the House of Commons and the House of Lords. After a protest by the National Union of Societies for Equal Citizenship as to the discrimination in the Bill against women (*i.e.*, their absolute exclusion from employment in painting with lead-paint), a debate in the House of Lords resulted in this exclusion being removed in respect of women already so engaged. It is understood that the Home Secretary will shortly publish a draft of the proposed Regulations, which, in addition to the ordinary hygienic precautions for cleanliness, medical inspection, etc., have for their chief feature the prohibition of the dust created in the process of dry rubbing down, the substitution of the innocuous wet process having been facilitated by the introduction of the various brands of waterproof sandpaper now on the market.

COMPARISON OF PRICES OF BUILDING MATERIALS ON NOVEMBER 1st, WITH CURRENT PRICES.

Materials.	November 1, 1926.	December 1, 1926.	Rise.	Fall.
	£ s. d.	£ s. d.	%	%
Bricks—				
Best Stocks	4 5 6	4 5 6	—	—
Flettons	2 13 3	2 13 3	—	—
Glazed	23 0 0	23 0 0	—	—
Thames Ballast	0 10 6	0 10 6	—	—
Thames Sand	0 14 6	0 14 6	—	—
Shingle (¾ in.)	0 12 9	0 12 9	—	—
Portland Cement	3 8 0	3 8 0	—	—
Ground Blue Lias Lime	2 13 6	2 13 6	—	—
Grey Stone Lime	3 0 9	3 0 9	—	—
Bath Stone	0 2 9½	0 2 9½	—	—
Portland Stone	0 4 4	0 4 4	—	—
Good Sound Building Timber—				
4 in. × 11 in.	28 0 0	28 0 0	—	—
3 in. × 11 in.	25 0 0	25 0 0	—	—
2 in. × 11 in.	25 0 0	25 0 0	—	—
3 in. × 9 in.	24 0 0	24 0 0	—	—
3 in. × 7 in.	20 0 0	20 0 0	—	—
3 in. × 4 in.	22 0 0	22 0 0	—	—
Slates—				
24 in. × 12 in.	37 12 6	37 12 6	—	—
22 in. × 12 in.	34 0 0	34 0 0	—	—
20 in. × 10 in.	25 12 6	25 12 6	—	—
16 in. × 10 in.	17 12 6	17 12 6	—	—
16 in. × 8 in.	13 15 0	13 15 0	—	—
R.S. Joists	12 10 0	12 10 0	—	—
Iron—				
Common Bars	13 0 0	13 0 0	—	—
Mild Steel Bars	10 0 0	10 0 0	—	—
Steel Bars	10 0 0	10 0 0	—	—
Cut Nails	19 0 0	19 0 0	—	—
Sheet Lead	41 0 0	41 10 0	—	5.68
Glass—				
15 oz. Sheet	0 0 3½	0 0 3½	—	—
21 oz. Sheet	0 0 4½	0 0 4½	—	—
26 oz. Sheet	0 0 5	0 0 5	—	—
Raw Linseed Oil	0 3 3	0 3 1	—	5.13
Turpentine	0 5 3	0 5 3	—	—
Ground English White Lead	52 15 0	50 15 0	—	3.75
White Lead Paint	71 5 0	70 5 0	—	1.40
Red Lead	44 0 0	42 0 0	—	4.54

THE WEEK IN PARLIAMENT

WESTMINSTER, *Wednesday.*

The City Churches.

Lord Hugh Cecil, in moving, in the House of Commons, "that, in accordance with the Church of England Assembly (Powers) Act, 1919, this House do direct that the Union of Benefices and Disposal of Churches (Metropolis) Measure, 1926, be presented to His Majesty for the Royal Assent," said that he was conscious he was undertaking a difficult task. He had against him the great Corporation of London, and also a very large body of artistic and archæological opinion. He would be altogether daunted were he not certain that that opposition was based on a profound misunderstanding and misinterpretation which had both misled the Corporation of London and those artistic societies, and had also made them the unwitting means of misleading others. Dealing with the history of the Measure, the speaker said that the Phillimore report was condemned by almost everybody whose support was necessary. He could hardly believe that all the churches marked for destruction in the report could be destroyed without serious artistic loss. Such churches as St. Alban, Wood-street, and St. Mary, Aldermanbury, for example, he would call it barbarous to pull down. It was not desired under the Measure to destroy churches; it was desired to have a proper and a wise decision, with abundant safeguards. Under the Measure, which closely resembled the Act of 1860, the first safeguard was the Commission—and the majority of the Commissioners were perfectly independent of the Bishop. The second safeguard was that the whole transaction was surrounded by a much greater degree of publicity than attached to the sittings under the Act. If a church was to be removed, notice must be sent to the Fine Arts Commission, who had to make an inquiry and send a report as to the artistic or architectural value of the church. If these churches were really of artistic value, there was no intention of destroying them. By all means let the artistic value of them be fully announced and duly weighed again, and if it turned out that they were all of them of such great value, then they could not possibly be destroyed under the Measure. This publicity was further secured, because notice had to be sent to a whole catalogue of artistic and other societies who were invited to object if they had any objection.

Sir T. Vansittart Bowater moved the rejection of the Measure on behalf of the City Corporation. Its object was to pull down the City churches and sell their sites in order to get money to spend elsewhere. These churches were built after the Great Fire by money provided by the citizens and were standing monuments in the history of the City of London. They were visited year by year by thousands of foreigners. Why should fine old churches, built by eminent architects, be sold for filthy lucre? He hoped that the House would say with no uncertain voice, "Hands off the City churches!"

In the debate which followed, Sir Martin Conway, on behalf of a number of learned and artistic societies, opposed the Measure. Among others, he said that those societies included the Royal Academy, the Royal Institute of British Architects, the National Trust, and the Society of Antiquaries. There was a simple and easy way out of the difficulty. Why had not the Church Assembly requested a Commission representative of the artistic, historical, and monumental bodies in this country to draw up a list of churches in the City of London which, in no circumstances whatever, should be destroyed or sold? Why had they refused to produce such a list unless they wanted to keep open the door for the destruction of any church in the City of London? These churches broke the visible materialism of the City and suggested that there was in the world something finer and greater than mere commerce and industry.

Mr. Ammon, a Labour member, contended that these churches were built by contributions regardless of creed or profession, and, therefore, no denomination had any right to bring forward any Measure to destroy them. They were a great spiritual heritage; and pointed away from the material things that largely possessed our lives.

Mr. McNeill, the Financial Secretary to the Treasury, opposed the Measure. The churches were not the exclusive property of the ecclesiastical authorities. In a special sense the ecclesiastical authorities held the churches as trustees. But the churches were not b ilt by Church property, or by the contributions of pious benefactors; they were built, after the Great Fire, by public money. Therefore, if the churches were pulled down and the sites sold, the Church would have no right to the money so obtained, and a proposal which appropriated such money to Church purposes ought to be resisted on that ground alone.

The motion that the Measure be presented for the Royal Assent was defeated by 124 to 27—majority against, 97.

Smoke Abatement Bill.

The Public Health (Smoke Abatement) Bill has passed through the Committee stage in the Commons without any important amendment, although on Clause 5, which extends the power to make by-laws to the provision in new buildings, other than private dwelling-houses, of heating arrangements to prevent or reduce the emission of smoke, Captain Waterhouse moved an amendment to br ng private dwelling-houses within the scope of the clause. Labour members supported the amendment, but Mr. Chamberlain opposed it, pointing out that it would not apply to the 8,000,000 houses at present in existence. Those were the houses that constituted the major portion of the smoke nuisance, and they would not be dealt with at all under the amendment. All that could be dealt with under the amendment were the 200,000 new houses which were being built every year. But 75 per cent. of these were already fitted with arrangements for cooking or heating by gas or electricity. It was better to exclude private dwelling-houses and to trust to the discovery of a smokeless fuel which could be used in an open grate.

The amendment was rejected by 18 votes to 7.

Slum Clearances.

Sir Harry Foster asked the Minister of Health whether he had now found some new basis of compensation for the owners of property taken under clearance schemes for new housing which would be fairer than the present one; and when the necessary legislation would be introduced?

Mr. Chamberlain said that the question of an amendment in some respects of the present basis of compensation had been receiving his attention, but he was not yet in a position to say when it would be possible to introduce legislation on the subject.

Colonel England asked the Minister if he was considering the amendment of Section 46 of The Housing Act, 1925, with a view to removing injustices to certain owners of properties in slum areas; and, if so, what action he proposed to take?

Mr. Chamberlain said he hoped to be able to introduce legislation on this subject, but he was unable at present to give any indication of the date of its introduction.

Stone for the House of Commons.

Sir Harry Brittain asked the Under-Secretary of State for the Home Department, as representing the First Commissioner of Works, whether stone from Darley Dale was to be used for the whole of the repairs to the Houses of Parliament; had he obtained information as to what large buildings in our great cities had been constructed with this stone; and whether it had been tested over a lengthy term of years to withstand the ravages of smoke and time?

Captain Hacking said it was proposed to use Stancliffe stone for the repair of all parts of the building, with the exception of the Cloister Court, for which Chilmark stone had been suggested. Many large Stancliffe stone buildings in London, Liverpool and Manchester had been inspected and had been found to withstand exposure for a considerable number of years. In one case, namely, St. George's Hall, Liverpool, no decay was visible after 80 years' exposure to an acid-laden atmosphere.

Lord Sandon asked whether the Government had accepted the report on the condition of the fabric of the Houses of Parliament; when the first estimates would be submitted; and what would be the additional total and yearly cost if repairs or replacements were effected in exact conformity with the original design.

Capt. Hacking said that the First Commissioner of Works was awaiting the advice of the Fine Arts Commission before reaching any decision regarding the repairs to the stonework, and it was not yet possible to state when an estimate would be submitted. The estimate contained in the Report provided for repairs being carried out in accordance with the original design, but the Fine Arts Commission were at present considering whether and to what extent it was possible to simplify various decorative features and eliminate detail without detracting from the original design of the buildings.

Sir W. Davison asked whether immediate steps could be taken to make good the stonework which had been removed from the central tower, which in its present state was a serious disfigurement to the building as a whole, without waiting for complete estimates for the necessary reparations to the rest of the building.

Capt. Hacking said that although the First Commissioner could not agree to deal with any portion of the repairs until he had received the recommendations of the Fine Arts Commission in regard to the building as a whole, he would certainly consider the possibility of dealing with that portion of the building in the early stages of the repairs.

Replying to Mr. N. Maclean, Capt. Hacking said that it would be for the House of Commons to decide whether the repairs to the stonework were to be carried out. The First Commissioner would always be glad, subject to financial exigencies, to consider any scheme for the reconstruction of the interior which would add to the convenience of members.

Repairs to Trafalgar-square.

Mr. Rye asked what steps would be taken to provide sufficient falls to the new paving in Trafalgar-square and by so doing avoid accumulations of surface rain water on the stones.

Capt. Hacking said he was informed that the new paving had been given the maximum amount of fall in every direction, having regard to the existing levels. A few small adjustments in the edges of some of the stones had still to be made to improve the surface drainage; but it was very difficult to prevent some temporary accumulations of water in such a large flat area as Trafalgar-square. The total cost of the work in Trafalgar-square was approximately £18,160. The cost of the stone and of laying it amounted to approximately £14,400, but it was found necessary during the course of the work to replace nearly the whole of the concrete bed, lay a new drainage system, and to provide new cast-iron pipes for the fountains, involving the additional expenditure of £3,760. There was no special supervising staff appointed, and records were not available of the staff charges attributable to any specific work.

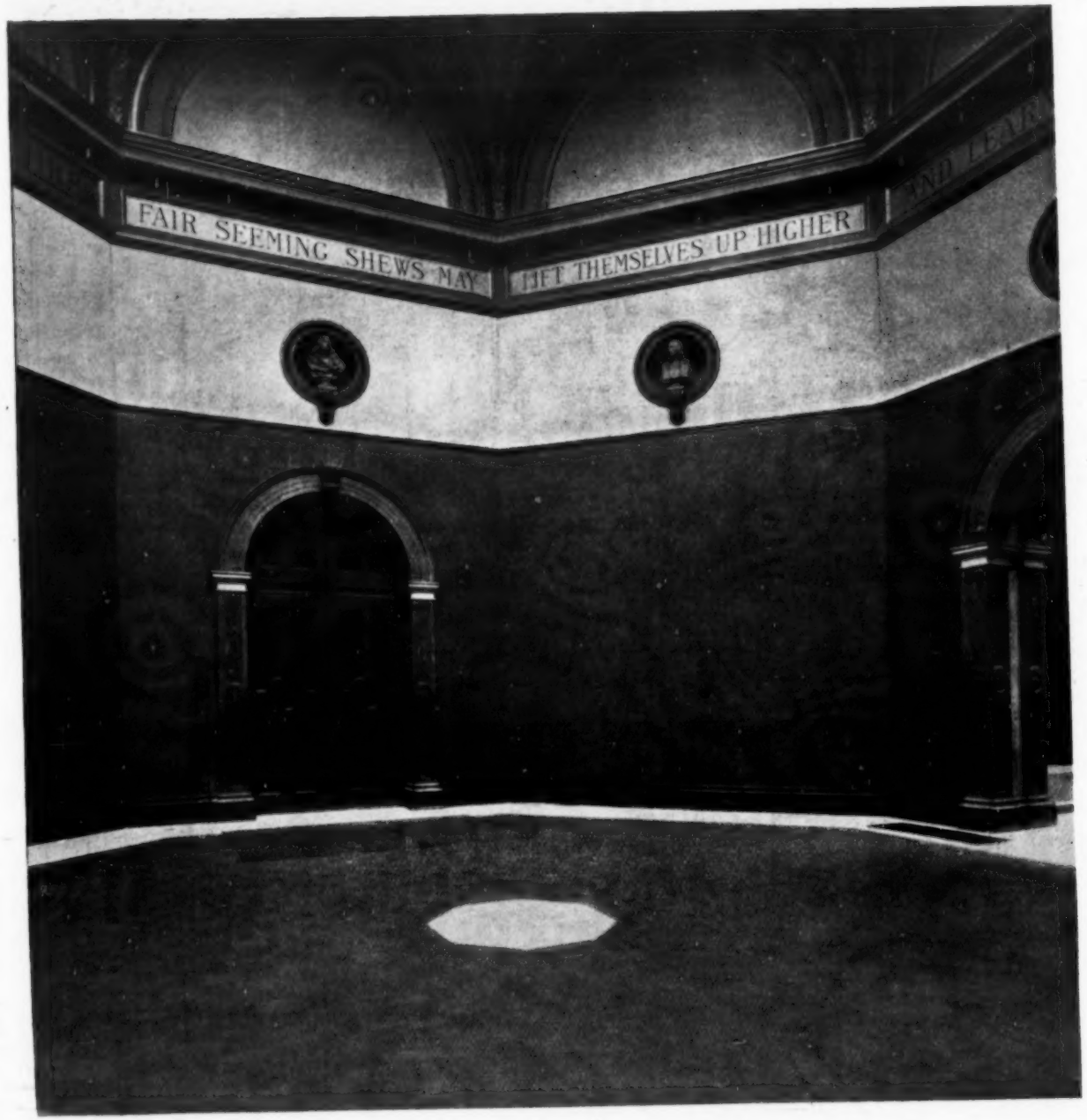
New Parliament Buildings in Northern Ireland.

Sir F. Wise asked what was the cost to date and the estimated total cost of the new parliament buildings, including the high courts and the speaker's house, in Northern Ireland?

Mr. R. McNeill said that the estimated total cost, including the cost of sites but not equipment, was £1,879,670. The cost to date had been approximately £367,268.

Steel Houses.

Sir K. Wood informed Sir F. Meyer that the number of external steel or cast-iron houses the erection of which had been authorised in England and Wales was 993, excluding those erected for demonstration purposes.



THE CENTRAL HALL, LAID WITH PATENT WOOD BLOCKS.

GALLERY NO. 4, LAID WITH FIGURED OAK PARQUETRY.

New Flooring, Royal Academy of Arts, Piccadilly.

NEW BUILDINGS IN LONDON

Bromley.—SCHOOL.—The Bromley Education Committee are to build a new central school clinic for medical service. Mr. F. H. Wood, Gloucester House, 19, Charing Cross-road, is the quantity surveyor. The Borough Engineer, Mr. S. Hawkins, has prepared the plans.

Cale-street. — EXTENSION. — At a cost of £26,682, St. Luke's Hospital, Cale-street, King's-road, Chelsea, is to be extended. Messrs. E. D. Winn & Co., Ltd., Halkin-place, S.W., has secured the contract. The work is to be carried out for the Chelsea Board of Guardians. Mr. Percy Adams, of 9, Knightsbridge, S.W.1, is the architect.

Cheyne-walk.—HOUSES.—We published in our last issue a statement to the effect that Chelsea Borough Council had purchased Nos. 64-69, Cheyne-walk with a view to the possible erection of houses, and that the Borough Surveyor was preparing plans. We are informed by Messrs. Elms & Jupp, FF.R.I.B.A., that the premises referred to form part of the Sloane Stanley Estate, for whom they act, and that none of the land is being sold. The architects have in preparation plans of twelve houses which are to be erected as soon as possible. We regret that inaccurate information should have been given in regard to this matter.

City-road.—PREMISES.—On a site in City-road and Tabernacle-street, new office premises are to be erected for Messrs. Singer. The plans are being prepared by Mr. W. H. Lewis, architect, 11 and 12, Finsbury-square, E.C.

East Sheen.—REBUILDING.—The "Derby Arms" public house is about to be rebuilt by Messrs. Limpus & Sons, of Kingston. The constructional steelwork is by Messrs. Young & Co., of 6, Queen Anne's-gate, S.W.1.

Finchley.—HOUSES.—Mr. E. Woodley Pollard, surveyor, 30, Princes-parade, Church End, Finchley, is preparing the plans and specifications for the erection of 20 semi-detached villas on the Willow Lodge Estate, Church End, Finchley, for Messrs. Burdett & May, of Bush House, Aldwych, W.C.2.

Marloes-road.—HOMES.—A new nurses' home is to be built at the St. Mary Abbott's Hospital, Marloes-road, Kensington, W.8, for the Kensington Board of Guardians. The plans have been prepared by Mr. A. J. Hodgeman, architect, 80, Coleman-street, E.C.2.

Old Ford-road.—BATHS.—At a cost of £115,000 the Bethnal Green Borough Council are to erect new swimming baths in Old Ford-road. Messrs. Bovis, Ltd., have just recently secured the contract for the foundations. Mr. A. E. Darby, the Borough Engineer and Surveyor, has prepared the plans.

Old Pry-street.—SCHOOLS.—An appeal is being made for £20,000 by the Rev. A. E. Cornibeer, Vicar of St. Matthew's Church schools, Westminster, 20, Great Peter-street, S.W.1, for the erection of new buildings in Old Pry-street. The architect is Mr. Gibbons.

Regent's Park.—EXTENSION.—The Committee of the Bedford College for Women, Regent's Park, are to build a new wing to their college. An appeal for £110,000 for this purpose is being made. The architects for this scheme are Messrs. Simpson & Ayrton, FF.R.I.B.A., 3, Verulam-buildings, Gray's Inn, W.C.1.

Shepherdess-walk.—FLATS.—Large four-story blocks of dwellings with over 100 flats are being erected by Messrs. Hall, Beddall & Co., to the designs of the City Engineer. Messrs. Young & Co., of 6, Queen Anne's-gate, Westminster, are supplying the constructional steelwork.

Studd-street. — EXTENSIONS. — Tenders are being invited for extensions to the Studd-street, Islington, post office garage, for His Majesty's Office of Works. The plans have been prepared by the Architects' Department of H.M.O.W.

Trafalgar-road. — BATHS. — The Greenwich Borough Council has accepted the tender of Messrs. Holliday & Greenwood, Ltd., 11, Buckingham Palace-gardens, S.W.1, at £121,908, for baths to be erected in Trafalgar-road, East Greenwich. Messrs. Waggett & Bradford, 12, Regent-street, Hull, are the quantity surveyors, and Messrs. Horth & Andrew, Whitefriargate, Hull, the architects.

PROPOSED BRITISH MOTOR ROADS

A REPORT has been submitted to the National Council of the Roads Improvement Association by Mr. W. Rees Jeffreys, of the proceedings that took place at the Fifth International Road Congress at Milan in September, with special reference to the possible introduction into Great Britain of specially constructed roads to be reserved exclusively for motor traffic. Put briefly, Mr. Jeffreys' more important recommendations may be summarised as follows :—

(I) That the road interests should seek a conference with the railway interests and negotiate a policy of co-operation.

(II) That loans be raised on the security of the Road Fund to finance the cost of new roads and new footpaths and that part of the money so raised shall be applied :—

(*a*) to building new roads exclusively reserved for motor traffic; and

(*b*) to purchasing in suitable cases non-paying branch lines from railway companies and converting them into roads.

(III) That the rules of the road embodied in Section 78 of the Highways Act of 1835 be reconsidered and amended so as to provide—

(*a*) that all vehicles shall keep to the left-hand edge of the road except when required to pull out for safety or for the purpose of overtaking;

(*b*) that the use of the carriageway by pedestrians where proper footpaths have been provided shall be restricted;

(*c*) that pedal cyclists shall, under certain conditions be permitted to use footpaths in rural areas.

Mr. Jeffreys states that the Italian conception of the special motor-roads is that they must be fenced off rigorously throughout their whole length from the surrounding country, entrance to them being gained only by gates in charge of gatekeepers. No road or rail may cross the autostrada on the level. It must pass over or under the motor-road. Being entirely fenced in, it is the antithesis of the British conception of the free and open road, and shows no appreciation of the evil results which severance brings about in a densely populated country like England.

The autostrada from Milan to Varese measures 31 miles and in addition there are branches to Como (15 miles) and to Siesto for the Simplon (7 miles). The actual money sunk in the road is (at the rate of 125 lire to the £) £656,000, and has been made up of subscribed and guaranteed capital, of which £200,000 is State guaranteed. The annual income last year (the second year of working) was £44,000, but to cover all liabilities £56,000 is required annually. The income is made up by daily tolls, season tickets, advertising incomes, &c., and was gained from the very small average of 1,000 cars a day.

The question of railway *v.* road interests not unnaturally arises.

Mr. Jeffreys suggests that Parliament should fix a minimum sum which shall be applied annually to the construction of new roads and bridges, including the provision of footpaths in rural districts, and that sum to be placed at the disposal of the Minister of Transport and withdrawn from Treasury control. The Minister then can either undertake to pay a percentage of the loan charges of local authorities undertaken for the construction of new roads up to a limit of 80 years, or may himself borrow on the security of the Road Fund for the construction of new roads and bridges, and spread the annual repayments over a similar period. The minimum sum to be set aside annually to meet interest and sinking fund charges should commence at three and rise to five millions per annum.

New Yorkshire Roadways.

The new road from High Green to Hangmanstone Bar, Birtwell, has reached a further stage, and it is reported that there was now nothing to prevent the County Council commencing on the scheme. The estimated cost is £128,500.

A VISIT TO THE NEW "LLOYDS"

STUDENTS attending the fortnightly visits to works in progress arranged by the Northern Polytechnic Department of Architecture, Surveying, and Building visited the new building of Lloyds on Saturday afternoon, November 20. This building is perhaps the largest one now in progress in the City. Sir Edwin Cooper is the architect, and Messrs. John Mowlem & Co., Ltd., are the builders. Some forty students were conducted around the building by Mr. Nunn, a representative of Sir Edwin, who went to great pains in showing and explaining the work from the basement, forty feet below the street, to the roof, a hundred feet above street level. The basement houses three large oil-fuel boilers for heating and hot water, also the pumping apparatus to a well 400 ft. deep. The storage tanks for water, which are constructed of reinforced concrete, are on the roof.

The building is a steel-frame structure comprising nine floors, a sub-basement, and basement. It is faced with Portland stone except for one face which is of carefully chosen stocks, of a warm buff colour. A feature to the windows on the brick face are the arches, which have red tiles on edge as the constructional units. The placing of the steelwork has received careful consideration, not only with a view to carrying the fabric but with an eye to the ultimate finishings of ceilings and wall surfaces.

The setting back of the upper floors to give the necessary angle of light demanded by the London Building Acts is well illustrated in the building. Among the modern aids to construction were noticed the steel shuttering used throughout for the concrete work, the tubular form of scaffolding, and the suspended scaffolding which is raised and lowered by windlasses attached to the working platform and operated by the bricklayers. The students were particularly interested in those floors which are slung from beams above—so giving an uninterrupted floor space—and the lift shafts, which are supported in a similar manner. The suspension steelwork runs through hollow partition walls. The whole of the steelwork is by Messrs. Dorman Long & Co., Ltd.

The floors and roof are of the hollow block tile type. The roof is to have a double layer of these blocks to ensure an equitable temperature in the upper rooms. This is, perhaps, a new feature in this country, but an excellent one, as some of the upper rooms in the large buildings of London are anything but comfortable during the heat of the day in the summer months. After an inspection of the temporary carpentry of the centering to the main entrance arches and of some of the working drawings, the tour came to an end.

Mr. Graham Keeble, who was in charge of the party, in moving a vote of thanks to Sir Edwin Cooper, Messrs. John Mowlem, and Mr. Nunn, said that this was the second visit to the building, the first having taken place in February, 1925, when the excavations and foundations were to be seen, and he hoped it would be possible for them to make another visit at a later date to see the finishings. This was seconded by one of the lecturers, and unanimously passed by the party.

New Floors in the R.A. Galleries.

We illustrate on page 920 two views in the galleries of the Royal Academy, showing the new wood floors which have been laid there by the "Zeta" Wood Flooring Co. (1910), Ltd. Last year, this firm carried out the following work there :—

Vestibule laid with figured oak long boards; and the Central Hall, the Lecture Hall, and No. 3 Main Gallery, laid with Bennett's patent bed grip and tongue system. Just recently the firm has completed Galleries Nos. 4, 5, 6, 7, 8, 10 and 11 with figured oak parquetry. The wearing qualities of these floors are well known; their excellent decorative effect may be judged from the illustrations. Mr. de Gruchy, headmaster of the Royal Academy School of Architecture, superintended the work.

RATES OF WAGES IN THE BUILDING TRADE

Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.

	Masons	Brick-layers.	Car-penters Joiners	Plas-terers.	Slaters.	Plum-bers.	Pain-ters.	Lab-ourer
Aberdare	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Accrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Alfreton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Alnwick	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Altrincham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashford (Kent)	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ashington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashton-under-Lyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Aylesbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Aylsham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Banbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barnsley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barnstaple	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Barrow-in-Furness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Basingstoke	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bath	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bedford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Berwick	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bexhill	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Birkenhead	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Birmingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bishop Auckland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackburn	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackpool	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bolton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bournemouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bradford-on-Avon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Braintree	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Bridlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Brighton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bristol	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bromsgrove	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bromyard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Bungay	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Burnley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burton-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Buxton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Canterbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Carlisle	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chatham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chelmsford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chesterfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chorley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cirencester	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/1
Clacton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cranbrook	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cromer	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Darlington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Derby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Devizes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Dewsbury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Doncaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dorchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Dorking	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dovercourt	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Driffield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Droitwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Dudley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Durham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Eastbourne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
E. Glam. (Mon. Val)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ely	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Exeter	1/7	1/7	1/7	1/7	1/7	1/7	1/6	1/2½
Exmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Fakenham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Felixstowe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Frome	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Glossop	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Goole	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Gosport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Great Yarmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grimsby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Guildford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Halifax	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harpenden	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Harrogate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hartlepools	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hednesford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hereford	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Herne Bay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hertford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hitchin	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hoddesdon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Holt	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Huddersfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hull	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hunstanton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Huntingdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Isle of Wight	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Ipswich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Keighley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
King's Lynn	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Lancaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leicester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leighton Buzzard	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lichfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lincoln	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Littlehampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Liverpool	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Llandudno	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Llanelly	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
London:								
12 m. radius	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/4½
12–15 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/4
Loughborough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Lowestoft	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Maidstone	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Malvern	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Manchester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Mansfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Matlock	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Melton Constable	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Melton Mowbray	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Merthyr Tydfil	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Middlesbrough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newark	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newcastle-on-Tyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newcastle-ur-Lyme	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
New Forest	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Newmarket	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Newport, Mon.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Nuneaton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Peterborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Plymouth	1/8	1/8	1/8	1/8	1/8	1/8	1/7	1/3½
Pontypridd	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Redditch	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ripon	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochdale	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Rochester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rugby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Saffron Walden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
St. Albans	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
St. Helens	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Sawbridgeworth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Saxmundham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sevenoaks	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sheffield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Shrewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sittingbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
South Shields	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stevenage	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stockport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockton-on-Tees	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stoke-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stourbridge	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stourport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stowmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stratford-on-Avon	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stroud	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5	1/1½
Sunderland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swaffham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Swansea	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Tamworth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Taunton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Thetford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Totnes	1/5	1/5	1/5	1/5	1/5	1/5	1/4½	1/1
Trowbridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Tunbridge Wells	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Uttoxeter	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wakefield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Walsall	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wallsend	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Warminster	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Warrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Welwyn Gar. City	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
West Bromwich	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Weston-sup.-Mare	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1
Weymouth	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/1½
Whitby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/3½
Wigan	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1
Winchester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/0½
Wisbech	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½
Wolverhampton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Woodbridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worcester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Worksop	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Worthing	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Wrexham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wroxham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wymondham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
York	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½

(For rates of wages in the Building Trade in Scotland, see page 929.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

DECEMBER 6.—**Ashburton.**—HOUSES.—Fourteen houses, for the U.D.C. J. N. Singleton, architect and surveyor, 3, West-street.

DECEMBER 6.—**Chelmsford.**—SCHOOL.—Erection and completion of a new elementary school, together with all outbuildings, fencing, playgrounds and caretaker's house, on the Boarded Barns Estate, Chelmsford, for the Town Council. Ernest J. Miles, Assoc. M.Inst.C.E., Borough Engineer, Municipal Offices, Rainsford House, Chelmsford. Deposit £2 2s.

DECEMBER 6.—**Edinburgh.**—BUILDING.—For (1) James Clark School, proposed new cloakroom, and (2) St. Ninian's R.C. School, proposed new playshed, for the E.C. J. Stewart, Executive Officer.

DECEMBER 6.—**Fulham.**—ALTERATIONS TO BATHS.—Alterations at the Public Baths, Walham Green, in connection with additional means of egress, for the Fulham B.C. Borough Surveyor, Town Hall, Fulham, S.W.

DECEMBER 6.—**Liverpool.**—ADDITIONS.—Alterations and additions to the Calder High School, Calderstones-road, for the T.C. Land Steward and Surveyor (Architectural Department). Deposit £2 2s.

DECEMBER 6.—**New Windsor.**—CONVENIENCE.—Public convenience in River-street, for the T.C. E. A. Stickland, Borough Engineer, 16, Alma-road, Windsor.

DECEMBER 6.—**Penarth.**—FLATS.—Twenty-two flats proposed to be erected on a site fronting St. Augustine's-crescent, Church-place South, and Clive-place, for the U.D.C. T. John, Clerk. Deposit £2 2s.

DECEMBER 6.—**Reigate.**—WOOD-FRAMED BUILDING.—Construction of an asbestos and wood-framed building, approximately 80 ft. by 25 ft., on the site adjoining Hooley Council School, St. John's-road, Redhill, for the Reigate E.C. Borough Surveyor, Municipal Buildings, Reigate.

DECEMBER 6.—**Rochford.**—HOUSES.—Ten parlour-type houses at Thundersley, for the R.D.C. A. C. Madge, surveyor, Rayleigh, Essex. Deposit £1 1s.

DECEMBER 6.—**St. Helens.**—PAINTING.—Internal and external painting of Eccleston branch library, Horace-street, for the C.B. A. W. Bradley, Borough and Water Engineer, Town Hall. Deposit 10s.

DECEMBER 6.—**Scotland.**—MAINTENANCE WORK.—Execution of maintenance works as follows: Edinburgh, Glasgow, Stirling, Aberdeen, Dundee—Carpenter and joiner and ironmonger; excavator, mason, and bricklayer; glazier; painter, paperhanger, and gilder; slater; plasterer; plumber; ironfounder and smith (not for Stirling). Paisley, Greenock, Perth, and Inverness—Carpenter and joiner and ironmonger; plumber, for H.M.O.W. Contracts Branch, H.M. Office of Works, Storey's Gate, S.W.1.

DECEMBER 6.—**Tynemouth.**—HOUSES.—Seventy-two houses on the Balkwell estate, for the C.B. Housing Architect, 19, Howard-street, North Shields. Deposit £2 2s.

DECEMBER 6.—**Wallasey.**—SHELTER.—Children's shelter, &c., at the Wallacre Recreation Ground, for the C.B. Borough Engineer and Surveyor. Deposit £1 1s.

DECEMBER 6.—**Woodford.**—HEATING.—Installation of a low-pressure hot-water heating system to the basement floor of the Council Offices, for the U.D.C. A. D. Ward, surveyor.

✱DECEMBER 7.—**Kingsbridge.**—HOSPITAL.—Erection of a cottage hospital on a site fronting the Plymouth-road, Kingsbridge, for the Committee of the Kingsbridge and Salcombe and District Hospital. Charles E. Ware & Son, 18, Bedford-circus, Exeter. Deposit £1 1s.

DECEMBER 7.—**Billingham.**—HOUSES.—Houses upon their estates, as follows, viz.: Belasis-lane, Haverton Hill, 32 parlour and 20 non-parlour; 32 parlour and 24 non-parlour; 36 parlour and 20 non-parlour; and Chilton's-lane site, Billingham, 38 parlour and 20 non-parlour, for the U.D.C. Kitching & Archibald, architects, 21, Albert-road, Middlesbrough.

DECEMBER 7.—**Bingley.**—ADDITIONS.—Alterations and additions to the school house, Bingley Eldwick Council School, for the C.C. B. Leah, Education Office, Bingley.

DECEMBER 7.—**Bri Chualann.**—CONVENIENCES.—Public lavatories, &c., on site between Municipal Baths and Strand-road, for the U.D.C. E. M. Murphy, surveyor. Deposit £1 1s.

DECEMBER 7.—**Cleethorpes.**—SCHOOL.—Additions to the Reynold-street School, for the Lindsey County E.C. Scorer & Gamble, architects, Bank-street Chambers, Lincoln. Deposit £2 2s.

DECEMBER 7.—**Cowdenbeath.**—PAINTING.—Painter work in connection with the erection of 56 houses at Stevensonsbeath, adjoining Stenhouse-street, for the T.C. C. A. Alexander, Burgh Surveyor. Deposit £2 2s.

DECEMBER 7.—**Ireland.**—BUILDING.—For (1) restoration of Kilmeedy ex-R.I.C. barracks, co. Limerick; and (2) the erection of a station for the Garda Siochana (Supplemental Force), at Tralee, co. Kerry, for the Commissioners of Public Works. J. J. Healy, secretary, Office of Public Works, Baile Atha Cliath, Dublin. Deposit £1 each.

DECEMBER 7.—**Normanton.**—HOUSES.—Eighty-four houses on the Hanson House estate, for the U.D.C. W. F. Copp., surveyor.

DECEMBER 7.—**Penistone.**—DECORATIONS.—Of rooms at the Grammar School, for the Governors. Clerk to the Governors.

DECEMBER 7.—**Shrewsbury.**—HOUSES.—Fourteen parlour and thirty-seven non-parlour houses on the Racecourse housing site, for the Corporation. Borough Surveyor. Deposit £2 2s.

DECEMBER 7.—**Winteringham.**—SCHOOL.—Erection of a new elementary school at Winteringham, for the Lindsey County E.C. Scorer & Gamble, architects, Bank-street Chambers, Lincoln. Deposit £2 2s.

DECEMBER 7.—**Woodsetts (Yorks).**—INSTALLATION.—Providing and fixing low-pressure hot-water installation at the new school, for the West Riding E.C. Education Department, County Hall, Wakefield.

DECEMBER 8.—**Acton.**—REPAIRS.—Acton (St. Mary's) Special School, internal and external repairs; Acton (St. Mary's) Junior Mixed School, internal and external repairs, for the Acton E.C. Office of the Borough Engineer, between 10 a.m. and 4 p.m. daily, except Saturday, when the hours are 10 a.m. and 12 noon. Deposit £1 1s., made payable to the Borough Treasurer, Municipal Offices, Acton, W.3.

DECEMBER 8.—**Brighton.**—PUBLIC LAVATORY.—Reconstruction of the Western Esplanade public lavatory (situated at the western boundary), for the Corporation. David Edwards, M.Inst.C.E., F.S.I., Town Hall, Brighton. Deposit £1.

DECEMBER 8.—**Ireland.**—SCHOOLS.—For the erection, furnishing and enclosing of (1) St. Columba's National School, Buncrana, Tirconaill; and (2) Kilcurly National School, Dundalk, co. Louth, for the Commissioners of Public Works. J. J. Healy, secretary, Office of Public Works, Baile Atha Cliath, Dublin. Deposit £1 each.

DECEMBER 8.—**Liverpool.**—TENEMENT DWELLINGS.—Erection of 101 tenement dwellings on the South Hill-road area, Dingle, for the Housing Committee of the City of Liverpool. Acting Director of Housing, Municipal Buildings, Dale-street, Liverpool. Deposit £1 1s.

DECEMBER 8.—**London.**—REPAIRS.—Repairs and decorations to caretakers houses at the Rothschild-road, South Acton Boys', South Acton Girls', and Acton Wells Schools, for the Acton E.C. Architect, Municipal Offices, Acton, W.3. Deposit 10s.

DECEMBER 8.—**Rochdale.**—LIGHTING.—Electric lighting and power installations to 238 houses on the Dicken Green Housing estate, for the C.B. Borough Surveyor.

DECEMBER 8.—**Southwell.**—PAINTING.—Interior painting and decorating of Dunham House, for the R.D.C. Sands & Walker, architects, Milton Chambers, Milton-street, Nottingham.

DECEMBER 9.—**Allerton Bywater.**—HEATING.—Low pressure hot-water installation to the additions to Allerton Bywater Lock-lane Council School, for the West Riding E.C. Education Department, County Hall, Wakefield.

DECEMBER 9.—**Belfast.**—STONE CARVING.—Execution of stone carving work, at the New Museum and Art Gallery, Botanic Gardens Park. Town Clerk's Office, City Hall, Belfast.

✱DECEMBER 9.—**Brighton.**—HOUSES.—Erection in brick of 60 on the Whitehawk Valley housing site, East Brighton, for the Corporation. Office of the Borough Engineer and Surveyor, D. Edwards, M.Inst.C.E., F.S.I., Town Hall, Brighton. Deposit £1.

DECEMBER 9.—**Bristol.**—RAILWAY OFFICE ACCOMMODATION.—Construction of new office accommodation at Bristol Temple Meads Goods Station, for the Directors of the Great Western Railway Co. Engineer at this Station, between 10 a.m. and 4 p.m. Deposit £2 2s.

DECEMBER 9.—**Clutton.**—HOUSES.—Four houses at Publow, for the R.D.C. Mr. Hawker, architect, Council Houses, Temple Cloud. Deposit £2 2s.

DECEMBER 9.—**Compton Bishop.**—HOSPITAL.—Isolation hospital at Compton Bishop, near Axbridge, Somerset, comprising administration, scarlet fever, diphtheria, observation, laundry, and disinfecting blocks, together with roads, drains, fences, &c., for the Axbridge, Burnham, and Highbridge Joint Isolation Hospital Committee. A. J. Pictor, F.R.I.B.A., 14, Queen-square, Bath. Deposit £2 2s.

DECEMBER 9.—**Gosport.**—MORTUARY.—Public mortuary in St. Matthew's depot, for the T.C. A. Barlow, Borough Engineer. Deposit £2 2s.

DECEMBER 9.—**London.**—NURSES' HOME.—Erection of a new nurses' home at St. Mary Abbot's Hospital, Marloes-road, Kensington, W. 8, for the Guardians of the Parish of Kensington. Guardians' Offices, Marloes-road, Kensington, W. 8, between the hours of 10 a.m. and 4 p.m. (Saturday, 10 a.m. to 1 p.m.)

DECEMBER 9.—**Sittingbourne.**—ADDITIONS.—Additions to the central premises, East-street, for the Co-operative Society, Ltd. M. Harvey, architect, 36, Station-street.

DECEMBER 9.—**Sligo.**—HOTEL.—Building of a hotel at Sligo Station, for the Great Southern Railway. Chief Engineer, Broadstone Station, Dublin. Deposit £2 2s

DECEMBER 10.—**Aberdeen.**—PLUMBING.—Plumber work in connection with the extension of the boiler-house at the Ferryhill Generating Station, for the Corporation. J. Alex. Bell, City Electrical Engineer.

DECEMBER 10.—**Airdrie.**—DEMOLITION.—Demolition and removal of Clarkston Old School, for the Lanark E.C. R. C. T. Mair, Clerk to the Authority, 9, Clydesdale-street, Hamilton.

DECEMBER 10.—**Dublin.**—PAINTING.—Paintings works at the buildings, &c., at the Royal Hospital, Kilmainham, for the Commissioners of Public Works. J. J. Healy, secretary, Office of Public Works, Baile Atha Cliath.

DECEMBER 10.—**Hull.**—BATHS.—Pipes and fittings, &c., for the Beverley-road baths, vapour and electrical baths, for the T.C. F. W. Bricknell, City Engineer.

DECEMBER 10.—**London.**—ALTERATIONS.—Alterations to the premises 587–591, Fulham-road, Fulham, for the Fulham B.C. H. M. de Colleville, A.R.I.B.A., architect, 48, Bedford-row, W.C.1. Deposit £3 3s.

DECEMBER 10.—**London.**—EXTENSIONS.—Extensions to the Post Office garage, Studd-street, Islington, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

DECEMBER 10.—**Neath.**—HOUSES.—For (*a*) 50 parlour-type houses, with sewers, on the Brynhyfryd-road site; (*b*) road works in connection with the above houses, for the T.C. H. Alex. Clarke, Borough Engineer. Deposit £3 3s.

DECEMBER 10.—**Tirconaill.**—SCHOOL.—Erection, furnishing and enclosing of a National School at Cnoe-na-Naomh, Tirconaill, for the Commissioners of Public Works. J. J. Healy, secretary, Office of Public Works, Baile Atha Cliath, Dublin. Deposit £1.

DECEMBER 11.—**Braintree.**—HOUSES.—Erection of 24, in two types, on the Cressing-road site, for the U.D.C. D. G. Armstrong, architect, Great-square, Braintree. Deposit £2 2s.

DECEMBER 11.—**Devon.**—SCHOOL AND HOUSE.—Erection of a grammar school and master's house at Colyton, Devon, for the Education Committee. County Architect, 97, Heavitree-road, Exeter. Deposit £2 2s.

DECEMBER 11.—**Edinburgh.**—IMPROVEMENT.—Demolition of properties, the erection of new boundary walls, and works incidental thereto at Nos. 21–25, Queen-street, No. 11, Bowie's-close, and Nos. 8–11, Water-street, Leith, for the T.C. Burgh Engineer.

DECEMBER 11.—**Mickleover.**—HOME.—Nurses' Home at Mickleover, for the Derby County Mental Hospital. Mr. G. H. Widdows, F.R.I.B.A., County Offices, St. Mary's Gate, Derby. Deposit £1 1s.

✱DECEMBER 11.—**Portsmouth.**—VARIOUS WORKS.—Tenders from builders and contractors for carrying out various works, and for the supply of certain articles in connection with the erection of quarters for night nurses, St. Mary's Infirmary, Milton, Portsmouth. G. E. Smith, L.R.I.B.A., Architect, Victoria-road North, Southsea, stating the items for which they propose to submit an estimate.

DECEMBER 11.—**Torquay.**—IMPROVEMENTS.—For (1) extension of shelter and cafe in reinforced concrete on the bathing platform, Torre Abbey Sands; and (2) construction of a short length of concrete foreshore and steps at the Beacon Bathing Cove, near the Corporation Medical Baths, for the T.C. Borough Engineer Deposit £4 4s.

DECEMBER 11.—**Tranent.**—SCHOOL.—New infant school at Tranent, for the East Lothian E.C. R. & A. K. Smith, surveyors, 44, Queen-street, Edinburgh. Deposit £1 1s.

DECEMBER 11.—**Whitehaven.**—ADDITIONS.—Alterations and additions to the Monkwray Council school, for the T.C. Borough Engineer and Surveyor. Deposit £2 2s.

DECEMBER 13—**Bromley.**—SCHOOL CENTRAL CLINIC.—Erection of a brick-built building of approximately 29,000 cubic feet, for the School Medical Service of the Borough, for the Bromley Education Committee. F. H. Wood, P.A.S.I., Chartered Quantity Surveyor, Gloucester House, 19, Charing Cross-road, London, W.C.2. Deposit £2 2s., payable to the Clerk to the Bromley Education Committee, Municipal Buildings, Bromley, Kent.

DECEMBER 13.—**Cheshunt.**—HOUSES.—Erection of 32 on the Paul's Nursery site, Waltham Cross, for the U.D.C. J. E. Sharpe, Engineer and Surveyor to the Council, Manor House, Cheshunt, Herts. Deposit £5 5s.

DECEMBER 13.—**Colchester.**—NEW NURSES' HOME.—Erection of, at the Essex and Colchester Mental Hospital, Severalls Mental Hospital, Colchester, for the Committee of Visitors, Essex County Council. County Architect, Springfield Old Court, Chelmsford. Deposit £1 1s.

DECEMBER 13.—**Durham.**—POST OFFICE AND TELEPHONE EXCHANGE.—Erection of, at Durham, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

DECEMBER 13.—**Margate.**—LAVATORIES.—Construction of women's lavatories on the Marine-terrace, for the T.C. E. A. Borg, Borough Engineer, 13, Grosvenor-place.

DECEMBER 13.—**Neston and Parkgate.**—HOUSES.—Thirty houses, and the execution of street and drainage works at Neston, for the U.D.C. Campbell & Honeybourne, architects, 51, North John-street, Liverpool. Deposit £1 1s.

DECEMBER 13.—**Totnes.**—POST OFFICE.—Erection of, at Totnes, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

DECEMBER 14.—**Bury.**—BUILDING.—New police station and courthouse, for the Lancashire C.C. Mr. H. Littler, County Architect, 16, Ribblesdale-place, Preston. Deposit £2.

DECEMBER 14.—**Clacton-on-Sea.**—HOUSES.—Erection of 64 at Great Clacton, for the U.D.C., in four contracts. Contractors are asked to tender for all or any of the contracts. Council's Surveyor, Council Offices, Clacton-on-Sea.

DECEMBER 14.—**Dewsbury.**—HOUSES.—Erection of 20 parlour houses and 44 scullery houses at Thornhill, eight parlour houses and 46 scullery houses at Raven's Lodge housing sites, for the County Borough Council. H. Dearden, A.M.Inst.C.E., Borough Surveyor, Town Hall, Dewsbury.

DECEMBER 14.—**Dublin.**—ADDITIONS.—Alterations and additions to the Royal Hospital Infirmary, Kilmainham, for the Commissioners of Public Works. J. J. Healy, secretary, Office of Public Works, Baile Atha Cliath. Deposit £1.

DECEMBER 14.—**Godstone.**—HOUSES.—Erection of 32 houses (14 Class "A" and 18 Class "B"), at Sunny Bank, Upper Warlingham, for the R.D.C. Sydney F. Evershed, A.R.I.B.A., Council's Surveyor, Lloyds Bank Chambers, Oxted. Deposit £3 3s.

DECEMBER 14.—**Limerick.**—LIGHTING.—Installation of electric light at the new military barracks, for the Commissioners of Public Works. J. J. Healy, Secretary, Office of Public Works, Baile Atha Cliath (Dublin). Deposit £1.

DECEMBER 14.—**Middlesbrough.**—ADAPTATION OF DRILL HALL.—Adaptation of a drill hall to an employment exchange, at Middlesbrough, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

DECEMBER 14.—**Thornton.**—HOUSE.—Teacher's house, for the East Riding C.C. County Architect, County Hall, Beverley.

✱DECEMBER 15.—**Gravesend.**—SCHOOL.—Construction of an elementary school at King's Farm, Gravesend, for the Borough Council. Office of the Architect, 4, Woodville-terrace, Gravesend. Deposit £3 3s.

DECEMBER 15.—**Hammersmith.**—ADDITIONS AND ALTERATIONS.—To No. 2 boiler house (principally steel and corrugated work), for the Metropolitan Borough Council of Hammersmith. F. Hill, Borough Electrical Engineer, Electricity Works, 85, Fulham Palace-road, W.6.

✱DECEMBER 16.—**London.**—INTERNAL PAINTING, &c.—At the G.P.O. (South), Carter-lane, E.C., for the Commissioners of His Majesty's Office of Works, Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

DECEMBER 16.—**Portsmouth.**—FLATS.—Twelve blocks of flats in Walden-road, Stamshaw, and for the maintenance thereof in thorough repair, for the T.C. A. W. Ward, City Engineer. Deposit £2 2s.

DECEMBER 16.—**Portsmouth.**—HOUSES.—200 houses on the housing site at Portsdown Hill, for the T.C. A. W. Ward, City Engineer. Deposit £3 3s.

DECEMBER 16.—**Salford.**—CONVENIENCES.—For (1) supply of retorts, firebricks, &c., and (2) erection of public conveniences at Church-street, Pendleton; and (3) providing 230 yds. of wrought-iron railing, for the T.C. City Engineer.

DECEMBER 17.—**Oldbury.**—HOUSES.—Forty-six houses on the Londonderry Farm estate, and the erection of four houses fronting to Bristnall Hall-road and Bristnall Hall-lane, for the U.D.C. W. Greenwood, engineer and surveyor. Deposit £2 2s.

DECEMBER 18.—**East Suffolk.**—BUILDING.—New junior Council school at Maidstone-road, Felixstowe, and enlargement of Mills Grammar School for Girls, Framlingham, for the E.C. J. Webb, Surveyor of County Buildings, County Hall, Ipswich. Deposit £2 2s. each.

DECEMBER 18.—**Farnham.**—HOUSES.—Forty houses on a site at the rear of East-street, for the U.D.C. R. M. Sargent, Building Inspector. Deposit £2 2s.

DECEMBER 18.—**Port Talbot.**—HOUSES.—For (1) construction of roads, sewers, together with the necessary manholes, and footpaths at the Duffryn Valley Housing site, and (2) 50 houses at the above site, for the T.C. Borough Surveyor. Deposit £5 each.

DECEMBER 20.—**Carlisle.**—STATION.—Transformer station at Raffles housing estate, for the T.C. P. Dalton, A.R.I.B.A., 18, Fisher-street.

DECEMBER 20.—**Rotherham.**—HOUSES.—Fifty houses in the parish of Whiston, for the R.D.C. J. Totty, architect, Moorgate-street. Deposit £2 2s.

✱DECEMBER 21.—**Barking.**—WATER FILTRATION, HEATING PLANT, AND BUILDING.—Plant and building in connection with the installation and erection at the Public Baths, East-street Barking, for the U.D.C.:—(*a*) water filtration and aeration plant; (*b*) heating apparatus for baths, concert hall, and slipper bath water; (*c*) building to house above plant.—R. A. Lay, Assoc.M.Inst.C.E., engineer and surveyor to the Council, Public Offices, East-street, Barking.

DECEMBER 21.—**Dinnington.**—INSTITUTE.—Erection of a mining and technical institute at Dinnington, for the West Riding E.C. The Education Department, County Hall, Wakefield.

✱DECEMBER 21.—**Torquay.**—TELEPHONE EXCHANGE.—Erection of at St. Mary Church, Torquay, for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners)

DECEMBER 27.—**Reigate.**—DECORATION WORK.—External and internal decoration works at the Municipal Buildings and Fire Station, Reigate, for the B.C. Borough Surveyor, Municipal Buildings, Reigate.

DECEMBER 31.—**Meltham.**—WIRING.—Wiring, fittings, &c., required in the installation of the electric light in the Parish Church, for the Church Council. W. R. Carter, secretary, Church Council, Birchfield.

JANUARY 7, 1927.—**Weymouth and Melcombe Regis.**—HOUSES.—Ninety-four houses on the Westham housing estate, for the T.C. P. Smallman, Town Clerk. Deposit £2 2s.

JANUARY 11.—**Yorks.**—HOUSES.—Tenders for all trades invited for the erection of the second section of 86 houses on the Ackworth-road housing site, Purston, for the Featherstone U.D.C. Samuel Chesney, A.R.I.B.A., Council Offices, Featherstone, Yorks.

NO DATE.—**Axbridge.**—COTTAGES.—Eight workmen's cottages at Sandford, for the R.D.C. Ball & Pope, A.A.R.I.B.A., Chartered Architects, 30, West-street, Weston-super-Mare.

NO DATE.—**Lasswade.**—LIGHTING.—Installation of heating system and electric light at Hawthornden Castle, Lasswade, for Sir James Williams-Drummond, Bart. Stewart Kaye, A.R.I.B.A., architect, 14, Hill-street, Edinburgh.

NO DATE.—**Wath-upon-Dearne.**—ADDITIONS.—Alterations and additions to "The George and Dragon," Barnsley-road, for J. Smith's Tadcaster Brewery Co., Ltd. B. Wilson, architect and surveyor, High-street, Tadcaster. Deposit £2 2s.

MATERIALS, etc.

DECEMBER 6.—**Chatham.**—PIPES.—595 tons of cast-iron pipes and specials, for the T.C. W. H. Radford & Son, chartered civil engineers, Albion Chambers, King-street, Nottingham. Deposit £3 3s.

DECEMBER 7.—**Ayr.**—MATERIALS.—Paints and varnishes, turpentine, white lead, oils, rubbing stones, paint, &c., for the Corporation Tramways. W. Grant, General Manager, Ayr Corporation Tramways, Town Buildings.

DECEMBER 7.—**Dublin.**—BLOCKS.—200,000 (more or less) creosoted wood paving blocks, for the C.B. J. J. Murphy, Town Clerk.

DECEMBER 7.—**Dublin.**—MATERIALS.—Iron castings, &c., paints, oils, chemicals, &c., stone paving setts and chippings, planks, deals, sheeting, &c., Portland cement, slates, &c., structural steel for shipbuilding and wrought iron, white and red lead, for the Dublin Port and Docks Board. E. H. Bailey, Secretary, Port and Docks Office, Westmoreland-street.

DECEMBER 8.—**Belfast.**—MATERIALS—Paints, oils, &c., timber, Portland cement, iron pipe castings, plumbing work, for the City and District Water Commissioners. W. I. Quinn, Secretary, Water Office, Belfast.

DECEMBER 8.—**London.**—STEELWORK.—For (1) structural steelwork, &c., for erecting unit and yard gantry, and (2) paints, &c., for the Bombay, Baroda and Central India Railway Co. S. G. S. Young, Secretary, the White Mansion, 91, Petty France, S.W.1. Charge 10s. each.

DECEMBER 9.—**Dublin.**—MATERIALS.—Bricks, castings, cement, glass, iron bars, lead, sheet, pipes, &c., oil, stoneware, pipes, and varnishes, for the Great Southern Railway Co. C. E. Riley, Secretary, Kingsbridge Terminus, Dublin.

DECEMBER 10.—**Durban.**—PIPES.—3,550 cast-iron spigot and socket pipes, Class "C," assorted, together with a quantity of specials, for the Durban Borough Engineer's Department. Department of Overseas Trade, 35, Old Queen-street, S.W.1 (A.X. 3848).

DECEMBER 11.—**Stockton-on-Tees.**—MATERIALS.—Cement, lead and compo pipe, castings, cast-iron S. and S. pipes, paints, oils, &c., lime, hand-picked (settle or Buxton) and building qualities, wrought-iron tubing, for the T.C. W. W. Atley, Engineer and General Manager, Corporation Gas Works, Thompson-street.

DECEMBER 15.—**Durham.**—PIPES.—Cast-iron pipes from 2 in. to 6 in. diameter, and special small castings, for the County Water Board. H. Robinson, Board's Engineer, Bishop Auckland.

DECEMBER 21.—**East Suffolk.**—MATERIALS.—Tarmacadam, granite, slag, flint, &c., local materials, *i.e.*, gravel, fine shingle and sand suitable for tarring operations, bitumen, refined tar or other compounds for surface treatment of roads, oils, grease, waste, &c., for the C.C. W. Jervis, County Surveyor, County Hall, Ipswich.

JANUARY 10, 1927.—**Melbourne.**—STEEL PIPE-LINE.—For approximately 700 tons of 30 in. to 51 in. steel pipe-line with accessories, for the State Electricity Commissioners of Victoria. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

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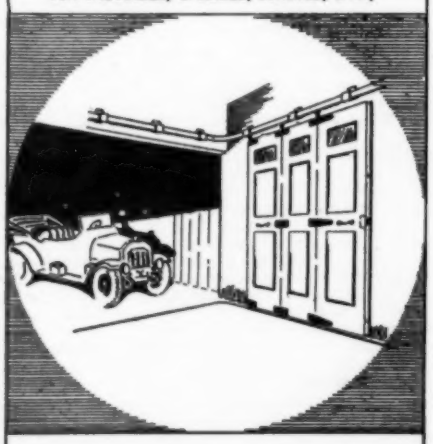

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DECEMBER 6.—**Llayn.**—RESERVOIR.—Construction of a small concrete service reservoir (45,000 gallons capacity) and intake works, the excavating and refilling of pipe trenches, providing hauling, laying, and jointing about 2,810 lineal yards of cast-iron S. and S. pipes, 4 in. and 3 in. internal diameter, at Tre-or, South Carnarvonshire, together with all sluice valves, air valves, fittings, and other works connected therewith, for the R.D.C. T. B. Farrington & Son, engineers, Trinity-square, Llandudno. Deposit £3 3s.

DECEMBER 6.—**West Ward.**—WATER SUPPLY.—For (1) ¾ mile (approximate) 2 in. diameter cast-iron pipes, delivered and laid complete, and the following: 35½ miles, 3 in.; 20 miles, 4 in.; 3¼ miles, 5 in.; ¼ mile, 7 in.; 1¼ miles, 5 in. diameter steel pipes, with valves and cast-iron and steel specials; also for the construction of break pressure tanks and valve chambers, on route of pipe lines; and (2) construction of three service reservoirs in mass concrete, having capacities of 200,000 gallons, 40,000 gallons and 25,000 gallons, respectively, together with valve chambers, valves, and cast-iron specials, for the R.D.C. J. J. Davison, engineer, 6, King-street, Wigton, Cumberland. Deposit £5.

DECEMBER 8.—**Goole.**—WIDENING.—Of the Southern span of the Dutch River Bridge, for the U.D.C. The works include reinforced concrete piles, mass concrete, wall, steel girders and decking. J. H. Castle, engineer and surveyor. Deposit £3 3s.

DECEMBER 8.—**Hendon.**—CULVERT.—Reconstruction of the carriageway, formation of footpaths, construction of a reinforced concrete culvert, &c. (approximately 900 yards super concrete carriageway, 170 yards granite kerbing, 360 yards super tar-paved footway, and 240 feet culvert), at Barrow Point-avenue, Pinner, for the R.D.C., H. W. Rackham, Engineer and Surveyor, Council Offices, Harrow Weald. Deposit £2 2s.

DECEMBER 8.—**Leicester.**—SEWERAGE.—Construction of new reinforced concrete weir chambers, pipe lines, ironwork, &c., and all other works in connection with piping the existing bacteria beds at the Beaumont Leys Farm, for the T.C. City Engineer. Deposit £5.

DECEMBER 9.—**Cairo.**—RESERVOIR.—At the town of Minia El Khamh, for the Minister of the Interior, Municipalities and Local Commission Sections. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

DECEMBER 15.—**Plymouth.**—PIPES.—Laying of about 90 yards of 6 in. diameter stoneware pipes, and the construction of inspection chambers, &c., on private property at the rear of Argyle-terrace, Camel's Head, for the C.B. J. Wibberley, Borough Engineer and Surveyor. Deposit £2 2s.

DECEMBER 16.—**Balcombe.**—RESERVOIR.—Construction of a reinforced concrete covered service reservoir of about 517,000 gallons capacity at the Balcombe Waterworks, for the Mid-Sussex Joint Water Board. F. Martin, Engineer, Waterworks Office, Haywards Heath. Deposit £3 3s.

DECEMBER 20.—**Leicester.**—SEWAGE DISPOSAL WORKS.—New detritus tanks, screening chamber, bellmouths, spillway and weir, drains, sewers, rising mains and roads, sludge and supernatant water-pumping station, recorder houses, &c., and other works in connection at the Abbey Pumping Station, for the T.C. City Engineer. Deposit £5.

DECEMBER 31.—**Borrowdale.**—BRIDGE.—Construction in reinforced concrete with local stone facing of a new bridge across the River Derwent, near Seatoller, in Borrowdale, for the Cumberland C.C. G. O. Lockwood, County Surveyor and Bridgemaster, The Courts, Carlisle. Deposit £2.

✱DECEMBER 31.—**Lancs.**—PLANT FOR MODERN BATHS.—Preliminary tenders, specifications, &c., from mechanical engineering firms specialising in the manufacture and installation of plant necessary for modern public baths, such as purifiers, aerators, calorifiers, boilers, filter, laundry fittings, &c., for the Middleton T.C. Borough Architect, Town Hall, Middleton.

JANUARY 4, 1927.—**Epsom.**—DRAINAGE.—Construction of about 8 miles of 7 in. and 9 in. stoneware and cast-iron sewers with manholes and other appurtenances at Cobham and Stoke D'Abernon, and for the construction of a settlement tank, three percolating filters, two humus tanks, and other works at the Sewage Treatment Works at Street, Cobham, for the R.D.C. John Taylor & Sons, engineers, Caxton House, Westminster, S.W.1. Deposit £5.

JANUARY 20.—**Lachmanghula.**—BRIDGE.—Cables and steelwork of a suspension bridge to be built at Lachmanghula, Dehra Dun district, for the United Provinces of Public Works Dept. H. V. S. Dillon, Executive Engineer, Meerut Provincial Division, India.

JANUARY 31, —**Egypt.**—BARRAGE.—Construction of a barrage and subsidiary works on the River Nile, near Nag Hammadi, for the Ministry of Public Works of the Egyptian Government. Goode, Fitzmaurice, Wilson & Mitchell, Consulting Engineers to the Egyptian Government, 9, Victoria-street, Westminster; or the Legation of the Egyptian Government, 7, Charles-street, Berkeley-square, W.1.

ROAD, SEWERAGE, AND WATER WORKS.

DECEMBER 6.—**Barnsley.**—IMPROVEMENTS.—Making and completing Welbeck-street (part of); back road between Faith-street and Hope-street; back road between Hope-street and Charity-street; back road between Charity-street and Grace-street, for the C.B. Borough Engineer.

DECEMBER 6.—**Bromley.**—SEWERS.—For (1) surface water sewer in High-street and Lower-road, Orpington, as follows:—Surface water sewer with concrete *in situ* manholes and other incidental works complete, including about 1,350 yds. lin. 24 in. concrete tubes

and 2,020 yds. lin. 21 in. concrete tubes; (2) soil sewer in Griggs Cross, Orpington, as follows:—Stoneware pipe soil sewer, with concrete *in situ* manholes, and other incidental works complete, including 260 yds. lin. 12 in. stoneware pipe sewer; (3) soil sewer, Station Hill, Orpington, as follows:—Stoneware pipe soil sewer, with concrete *in situ* manholes, and other incidental works complete, including 320 yds. lin. 6 in. stoneware pipe sewer; (4) road widening and reconstruction, surface water drainage, &c., in Scads Hill, Chislehurst-road, Orpington, as follows:—Widening carriageway, forming footpaths, kerbing, and 9 in. surface water sewer, including excavation, foundation, surfacing and other incidental works complete, about 470 yds. lin.; and (5) excavation work, &c., in depot site, Station Hill, Orpington, as follows:—Excavation (about 8,000 cub. yds.), hauling, levelling, forming banks, &c., at Council's new depot site, for the R.D.C. L. J. Small, Engineer, Park House. Deposit £16 16s.

DECEMBER 6.—**Chatham.**—SEWERS.—Construction of sewers as follows: 380 yds. lin. 36 in. diameter iron pipe sewers; 340 yds. 30 in.; 200 yds. 24 in.; 125 yds. 21 in.; 430 yds. 18 in.; 130 yds. 9 in.; 150 yds. 7 in.; 100 yds. 27 in. diameter stoneware sewer; 280 yds. 24 in.; 360 yds. 21 in.; 800 yds. 18 in.; 635 yds. 15 in.; 2,520 yds. 12 in.; 3,400 yds. 9 in.; 11,800 yds. 7 in., for the T.C. W. H. Radford & Son, chartered civil engineers, Albion Chambers, King-street, Nottingham. Deposit £5 5s.

DECEMBER 6.—**Grimsby.**—WIDENING.—Of Church-lane, including structural steelwork, for the Highways Committee. H. G. Whyatt, Borough Engineer and Surveyor, 170, Victoria-street. Deposit £1 1s.

DECEMBER 6.—**Manchester.**—SEWERING.—Sewering of Cannon-street, from Corporation-street to Bank Buildings, for the T.C. P. M. Heath, Town Clerk. Deposit £1 1s.

DECEMBER 6.—**Margate.**—MAINS.—Supplying and laying the following water mains, with the necessary hydrants and fittings, for the Corporation, viz.:—168 yards of 6 in. main in Dane-road, 147 yards of 4 in. main in Waverley-road, Garlinge, and 447 yards of 4 in. main in Tivoli Park-avenue. Borough Engineer and Surveyor, 13, Grosvenor-place.

DECEMBER 6.—**Margate.**—SEWER.—Construction of 988 yards of 33 in. and 94 yards of 21 in. concrete tube sewer, for the T.C. E. A. Borg, Borough Engineer.

DECEMBER 6.—**The Maldens and Coombe.**—SEWER.—For constructing about 328 yards run 18 in. stoneware soil sewer in heading about 20 ft. deep, with concrete tube manholes, from existing sewage works to a point near Beresford-road; constructing about 330 yards run 18 in. soil sewer in heading about 20 ft. deep, with concrete tube manholes, from S.E. side of railway to Green-lane, and construction of 330 yards run 9 in. soil sewer in open cutting, for the U.D.C. Engineer and Surveyor, Council Offices, New Malden. Deposit £2 2s.

DECEMBER 8.—**Birmingham.**—SEWER.—Construction of about 3,950 yards of brick and concrete, concrete tube and stoneware pipe sewers, in Shirley-road, Olton Boulevard and Fox Hollies-road, Acocks Green, for the T.C. H. H. Humphries, City Engineer and Surveyor. Deposit £2.

DECEMBER 8.—**Cheadle and Gatley.**—SEWER.—Construction of approximately 731 yds. of 12 in. sewer, with necessary junctions, manholes, &c., for the U.D.C. G. P. Stanley, acting engineer and surveyor.

DECEMBER 8.—**Hendon.**—ROADS.—Reconstruction of the carriageway, formation of footpaths, construction of a reinforced concrete culvert, &c., approximately 900 yards super concrete carriageway, 170 yards granite kerbing, 360 yards super tarpaved footways, and 240 ft. culvert at Barrow Point-avenue, Pinner, for the R.D.C. On application to the Engineer and Surveyor, Council Offices, Harrow Weald. Deposit £2 2s.

DECEMBER 8.—**Leeds.**—KERBING.—Kerbing, flagging, tar-paved footpaths, paving and tar macadamising in the following streets: Wood-lane (part), West Park-avenue (part), back Milan-road (part), Kitchener-avenue, Ryder-gardens, Lidgett Park-avenue (part), back Northfield-terrace (part), also for kerbing tar-paved footpaths, and tar macadamising in a number of streets on the Middleton housing estate, for the T.C. Highways and Permanent Way Engineer, 1, Swinegate. Deposit £1 1s. each.

DECEMBER 8.—**Southend-on-Sea.**—SEWERAGE.—Construction of about 375 lin. yds. of 15 in. diameter, about 596 lin. yds. of 12 in. diameter, and about 107 lin. yds. of 9 in. diameter glazed stoneware pipe sewer; 40 lin. yds. of 15 in. diameter cast-iron pipe sewer under railway, and incidental works in connection with the Eastern District sewerage, for the C.B. R. H. Dyer, Borough Engineer and Surveyor. Deposit £1.

DECEMBER 9.—**Braintree.**—RECONSTRUCTION.—Reconstruction works to carriageway of Railway-street, for the U.D.C. Surveyor, Vestry Hall.

DECEMBER 9.—**Fittleworth.**—REPAIRS.—Repairs to a portion of Fittleworth school playground. The Rectory, Fittleworth.

DECEMBER 11.—**Edinburgh.**—SEWERS.—Construction of new fireclay pipe sewers on the Gorgie-road, for the T.C. Burgh Engineer.

DECEMBER 13.—**Ilford.**—STREET WORKS.—Excavating, hardcoring, gravelling, metalling with granite, tar-spraying, paving, kerbing, channelling, lighting and making good Mornington-avenue, for the T.C. Engineer and Surveyor. Deposit £2 2s.

DECEMBER 13.—**Knaresborough.**—SEWER.—Main sewer on Crag-top, for the U.D.C. E. Prest. Council Offices, York-place.

DECEMBER 13.—**Walton-on-Thames.**—MAKING-UP.—Sewering and making-up of part of Old-avenue, about 302 yards in length, for the U.D.C. R. Wilds, engineer and surveyor. Deposit £2 2s.

DECEMBER 13.—**Whitstable.**—RECONSTRUCTION.—Of the carriageway in tarred slag macadam with reinforced concrete foundation at Marine-parade (part of), and Church-street-road (part of), Tankerton, together with the supply of all materials for same and all works contingent thereto, for the U.D.C. J. Dunn, surveyor and water engineer, 35, Oxford-street. Deposit £2 2s.

DECEMBER 14.—**Barnes.**—MAKING-UP.—Of Enmore-gardens, including the extension of same to Stonehill-road, for the U.D.C. F. P. Kindell, Surveyor, The Council House, High-street, Mortlake, S.W.14.

DECEMBER 14.—**Carlow.**—EXTENSION.—6,500 yards of 6 in. diameter, and 7,600 yards of 8 in. internal diameter cast-iron pipes from the intake weirs at Ardaleggle and Monavea to Killeshin Impounding Reservoir, and thence to Dublin-street, Carlow, together with all sluice, scour air valves, cross connections and concrete intake weirs, for the U.D.C. Pierce F. Purcell, Consulting Engineer, Ashton, Killiney, co. Dublin. Deposit £5.

DECEMBER 14.—**Epsom.**—WIDENING.—Widening and improvement of Church-street and Grove-road, for the U.D.C. Surveyor, 33, Church-street.

DECEMBER 14.—**Guildford.**—SEWERAGE.—Construction of a new 9 in. sewage pumping main, approximately 940 yards in length, for the T.C. J. W. Hipwood, Borough Surveyor.

DECEMBER 14.—**Tottenham.**—MAKING-UP.—Of (*a*) Havelock-road, and (*b*) Hollington-road, for the U.D.C. Engineer. Deposit 10s. 6d.

DECEMBER 14.—**Urmston.**—MAKING-UP.—Making-up and resurfacing with tarmacadam and channelling the carriageway of Railway-road, for the U.D.C. J. Heath, Surveyor. Deposit £2.

DECEMBER 15.—**Hillingdon.**—DRAINAGE.—Drainage and laying-out of additional cemetery of some 6 acres adjoining their present cemetery, for the Cemetery Joint Committee. W. L. Eves, F.R.I.B.A., F.S.I., 54, High-street, Uxbridge. Deposit £2 2s.

DECEMBER 15.—**London.**—MAKING-UP.—The footpaths in Steventon-road, between Sundew-avenue and Old Oak-road, comprising artificial stone paving, tar-paving, relaying and redressing kerbs, and provision of trees, for the Hammersmith B.C. R. Hampton Clucas, Borough Engineer and Surveyor, Town Hall, Hammersmith, W.6.

DECEMBER 18.—**Gloucestershire.**—REPAIRS.—Contracting for asphalt carpeting, the supply of clean and tarred road stone and sea gravel for use on main roads, for the C.C. County Surveyor, Shire Hall, Gloucester.

DECEMBER 20.—**Sandwich.**—ROAD.—New road from the Deal to Sandwich main road to How Bridge—a length of about 187 yards—and for widening and improving Broad-lane from How Bridge to Primrose-lane—a length of about 1,800 yards—for the Eastry R.D.C. H. Barker, engineer, 80, Queen-street, Deal. Deposit £3 3s.

DECEMBER 21.—**Uckfield.**—SEWAGE.—Improvements to the Crowborough sewage disposal works at Redgate Mill, for the R.D.C. T. Burdett, Sanitary Inspector. Deposit £1 1s.

Auction Sales, Tenders, etc.

DECEMBER 7.—**Bucks.**—Charles R. Davis & Co. will sell, upon the premises, Goldhill-lane, Chalfont St. Peter, under a deed of assignment, *re* W. J. Smith, by order of the Trustees, "Grange" Joinery Works, Chalfont St. Peters, Bucks, the whole of the stock-in-trade, plant and woodworking machinery of a builder and contractor. Auctioneers, Goldhill Lane, Chalfont St. Peter.

DECEMBER 7.—**Essex.**—Weatherall & Green will sell, at the London Auction Mart, 155, Queen Victoria-street, E.C., a freehold market and eight main road shops, also available for any commercial purpose, garage, cinema, dance hall, also freehold shops, Nos. 2A, 4, 6, and 10, Goodmayes-road, 5, Orchard-gardens, and 1, Westwood-parade, and freehold ground rents, freehold building land in Pembroke-road. Auctioneers, 22, Chancery-lane, W.C.2.

✱DECEMBER 8.—**Merton.**—Veryard & Yates will sell, without reserve, at Merton (adjoining Wandle Bridge), timber, fittings and building materials. Auctioneers, 365, Norwood-road, S.E.27.

DECEMBER 10.—**Epsom.**—Chas. Osenton & Co. will sell (unless previously sold), by order of Messrs. Stone & Co., Ltd., at the "Spread Eagle" Hotel, Epsom, with vacant possession, close to and with access from the main London-Dorking road, the freehold known as The Nonsuch Brickworks, with private railway siding, having an area of about five acres. Auctioneers, Epsom, and 9, Old Jewry Chambers, E.C.2.

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✱DECEMBER 15.—**London.**—F. H. Clark will sell, without reserve, at Mars-avenue, Well Hall-road, Eltham, Government surplus huts, timber and building materials, galvanised corrugated iron, roofing glass, &c. Auctioneers, Victoria House, 117, Victoria-street, S.W.1.

Competitions.

(*See Competition News page* 894.)

Public Appointments.

DECEMBER 6.—**London.**—(1) Visiting Instructor of Applied Art for seven half-days weekly, with knowledge of the painting and decorating trades. (2) Visiting Assistant Instructor in Geometry and Graphics for two evenings weekly (advanced knowledge of constructive geometry applied to building crafts essential), required by the L.C.C. at their School of Building, Ferndale-road, Brixton, S.W.4. Education Officer (T1 (*a*)), The County Hall, Westminster Bridge, S.E.1 (stamped addressed foolscap envelope necessary), for form.

DECEMBER 6.—**Reading.**—Clerk of Works, to act under the direction of the Housing Architect in connection with the Corporation's housing scheme, required by the County Borough Council of Reading. C. S. Johnson, Town Clerk, Town Hall, Reading, endorsed "Clerk of Works."

✱DECEMBER 8.—**Sunderland.**—Clerk of Works required to superintend (under the direction of the Architects and Consulting Engineer) various engineering schemes at the Poor Law Institution, Hylton-road, Sunderland. W. P. Brantingham, Clerk to Guardians, Union Offices, 17, John-street, Sunderland.

✱DECEMBER 13.—**Nuneaton.**—Town-Planning and General Assistant in the Borough Engineer's Department required by Town Council. R. C. Moon, Assoc. M.Inst.C.E., Borough Surveyor and Water Engineer, Municipal Offices, Queen's-road, Nuneaton, endorsed "Town-Planning and General Assistant."

DECEMBER 16.—**Lancashire.**—County Architect required by the Lancashire C.C. G. Hammond Etherton, Clerk of the Council, County Offices, Preston.

✱DECEMBER 17.—**Gravesend.**—Architectural Assistant (temporary) for a period of not less than two years required by the Corporation. H. H. Brown, Town Clerk, 4, Woodville-terrace, Gravesend.

✱DECEMBER 17.—**Wigan.**—Architectural Assistant required in the Borough Engineer's Department by the B.C. R. B. Donald, M.Inst.C.E., Borough Engineer, Wigan.

✱DECEMBER 18.—**Dorset.**—Junior Architectural Assistant required by the Dorset County Council. J. Leslie Torr, Clerk of the County Council, County Offices, Dorchester, endorsed "Junior Architectural Assistant."

✱NO DATE.—**Brighton.**—Three temporary Architectural Draughtsmen capable in design and working drawings for the County B.C. Applications as early as possible, David Edwards, M.Inst.C.E., F.S.I., Borough Engineer and Surveyor, Town Hall, Brighton.

NO DATE.—**Mitcham, Surrey.**—General Clerk in the Surveyor's Department required by the U.D.C. Burnett Bullock, Engineer and Surveyor, Broadway House, Mitcham.

TRADE NEWS

Catalogues Wanted.

Mr. T. H. Taylor, L.R.I.B.A., Britannia Offices, The Powell Duffryn Coal Co., Ltd., Pengam, near Cardiff, will be glad to receive catalogues from all manufacturers.

Stained Glass Windows.

We understand that the four new stained-glass windows which the Bishop of Knaresborough dedicated in the parish church of Winksley recently were designed and executed in their entirety by Mr. Chas. E. Steel, of Tudor Studios, York-place, Leeds, who specialises in stained glass-work and all church decoration. The windows have been carried out in keeping with the interior of the church.

The City Lodge, Cardiff.

We understand that this building has recently been equipped throughout with G.E.C. fittings and Osram gas-filled lamps. As instancing the present-day trend of "no-glare" lighting, it is of interest to record that over 800 bowl-sprayed white Osram gas-filled lamps were supplied for the lighting of this building. The whole of the lamps and fittings were supplied by the General Electric Co., Ltd., of London and Cardiff.

New Hardware Showrooms.

Messrs. Parker, Winder & Achurch, Ltd., announce that they have recently opened extensive showrooms at 4, Great Marlborough-street, Regent-street, London, W.1, which contain a unique collection of period fireplaces. Space has also been allotted for sanitary appliances, and an additional showroom for high-class door and window fittings; while their fencing department exhibit ranges of their various types of "Empire" wire and chestnut fencing.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T for Ministry of Transport; C.B. for County Borough; B.E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board.

ABERYSTWYTH.—Mr. P. Hing, F.R.I.B.A., architect, 121, Colmore-row, Birmingham, has a scheme in preparation for the erection of a new, up-to-date hotel on the site of the old Waterloo Hotel in Marine-road, and Terrace-road. The estimated cost is £50,000.

ASHTON-UNDER-LYNE.—The T.C. has applied to the M.H. for sanction to borrow £22,345, the estimated cost of erecting 48 houses on the Oak Fold Estate at Hurst.

BACUP.—The E.C. are proposing to erect a new elementary school in the Britannia district, estimated to cost £10,312.

BAMPTON.—The U.D.C. has decided that Mr. Seward and the Surveyor should amend the specifications for the purpose of inviting tenders for 14 houses each at Bampton, and 10 houses at Shillingford, or alternatively for the erection of the whole lot.

BARNSLEY.—The E.C. has recommended the enlargement of Monk Bretton school, and Messrs. Dyson, Cawthorne & Coles, architects, have been instructed forthwith to prepare preliminary plans for the enlargement of the premises.—Messrs. Dyson, Cawthorne & Coles were also instructed to submit rough sketch drawings of a junior school which it is proposed to erect in part of the playground of the existing Ardsley Oaks School.

BASINGSTOKE.—The Joint Mental Hospital Visiting Committee of Hampshire C.C. recommend the erection of a nurses' home at Park Prewet (Basingstoke) Mental Hospital, at an estimated cost of £25,000. The C.C. approved the scheme.

BATTLE.—The R.D.C. are to make application to the M.H. for sanction for a loan of £5,550 for the erection of six pairs of houses, two pairs at Sedlescombe, two at Mountfield, and one pair each at Crowhurst and Ewhurst.

BECONTREE.—The Essex E.C. recommend the purchase of 2¼ acres of land on the Becontree Estate as a site for the erection of the eighth school.

BILLINGHAM.—In regard to the question of school accommodation at Billingham and Haverton Hill, it was reported at the Council meeting that the County Council had given notice of their intention to provide a new public elementary school for about 450 children in the urban area.

BIRKENHEAD.—Application is to be made by the E.C. for sanction to borrow £21,316 for the erection of the new Cole-street Council school.

BIRMINGHAM.—In opening the annual sale of work in aid of St. Mark's Church, Monument-road, Birmingham, Mrs. E. W. Barnes referred to the new appeal launched by the Bishop of Birmingham for Church extension purposes. In St. Mark's parish a vigorous effort has been made to obtain funds for church restoration and repairs and the renovation of the organ.

BOLTON.—The Watch Committee approved a resolution of the Fire Brigade Sub-Committee instructing the Borough Engineer to prepare detailed plans and estimates of cost for the proposed extensions of the Fire Station.

BRIGHTON.—An important development of the Brighton road-racing motor track scheme has been decided upon. The site of the proposed track is at Mile Oak, some five miles from Brighton, but readily accessible by rail and road. The cost was originally estimated at £22,000, but the suggested enlargement will increase this figure to £50,000.

BURGESS HILL.—The East Sussex C.C. has accepted a tender of £705 14s. 2d. in respect to proposed additions, alterations, &c., at the teacher's house attached to Burgess Hill London-road Council school.

CARLISLE.—The Salvation Army are proposing to erect a new hall at St. Nicholas-street. The plans provide for a building to cost between £2,000 and £3,000.—The Housing Committee of the Corporation has decided to erect a further hundred municipal houses, principally three-bedroom dwellings.

CHELMSFORD.—The T.C. has resolved to recommend that the tender of Mouchel & Partners for the supply of steel reinforcement in connection with the reservoirs for the new water scheme be accepted, and further that the Borough Engineer ascertain from them upon what terms they would obtain tenders for and supervise the construction of the reservoirs.

CHESTERFIELD.—The congregation of St. Augustine's Church are raising funds for the erection of a new edifice and vicarage estimated to cost £10,000. A site has been secured.

CLACTON-ON-SEA.—The U.D.C. passed plans: Hotel and garage, Marine-parade Extension, for J. E. Ball; two houses in West-avenue, for Mrs. J. M. Church and T. H. Land; two bungalows in Sladburys-lane, for B. Parkes; house in Connaught-gardens, for Rev. W. H. Timms; two houses at corner of St. Osyth and Coronation-roads, for T. Pethybridge; four houses in Coronation-road, for T. Pethybridge; bungalow in Cotswold-road, for Executors of the late W. Ling; bungalow east of Highview estate, for W. C. Taylor; two houses in Severn-road, for G. Moxon; house in Carrs-road, for Mrs. F. Mann; house in Pier-avenue, for Mrs. E. E. Easterford; shops and flat in High-street, for T. R. Lavender; two houses in West-avenue and two houses in Park-road, for Holloway & Cole.

CLITHEROE.—Mr. H. Littler, county architect, 16, Ribblesdale-place, Preston, is proceeding with the preparation of plans for a new school for 320 children at Brownlow-street.

COULSDON AND PURLEY.—The U.D.C. has approved plans: Lawes, Cherry & Co., detached and 10 semi-detached houses, Purley Bury-avenue and Brancaster-lane, Purley; E. T. Brown & Son, detached house next "Hillcrest," Oakwood-avenue, Purley; F. W. Thomas, two houses, The Church Way, Sanderstead; Miss M. I. Beaufort, house, Marlpit-lane, Coulsdon; E. Cleaver & Co., bungalow, Northwood-avenue, Purley; J. G. Cooper, house, Vincent-road, Coulsdon; F. Underhill, house, Higher-drive, Purley; Varley & Parker, three pairs houses, Northwood-avenue, Purley.

CROYDON.—The C.B. passed plans: A. C. S. Wheeler, 11 houses, 28–48, Beauchamp-road; G. Dimier, bungalow, Biggin Hill, at Beulah Hill; W. G. Ingram, 27 houses, Georgia-road and Green-lane; J. J. Moore & Son, house, Croham-road; F. C. Stoneman, two houses, 23–25, Hamilton-road; P. Richardson, two houses, Chipstead-road; H. P. Hawkes, house, Woodmansterne-road; F. C. Smith, bungalow, Orchard Way; W. Aston, 10 houses, two garages, Oliver-avenue; Alder & Turrel, Sunday school building, between 2, Fernham-road and W.M. church; H. L. Bunn, house, The Glade, Monks Orchard; E. J. Cusden, seven garages and lavatory, 12–24, Sussex-road; Browett, Taylor, Robertson & Morgan, six houses, Lonsdale-road; Thomas & Son, amended block plan two houses, Norbury-hill; F. W. Rees & Partners, three houses and garages, Upfield-road; house and garage, Addiscombe and Upfield-roads; P. Richardson, five shops and 23 houses, Whitehorse-lane and Wrights-road.—The C.B. has approved the widening of Spa Hill at the bend of the road, and erecting a new close pale oak fence on the improvement line at an estimated cost of £112.—Alterations are to be carried out at the Reference Library, at a cost of £380.—The Council has received the formal sanction of the M.H. to the borrowing of £54,474 for the erection of 118 further houses to complete the development of the Waddon housing estate.—The following work has received the Ministry's final approval to the borrowing of £11,680 for buildings, conveniences and baths, complete with drainage; heating apparatus, boilers, electric light, &c.

DEWSBURY.—Mr. T. W. Sharp, architect, Ravensthorpe, is the architect for the proposed scheme for the erection of a new infirmary for the Governors of the Dewsbury and District Infirmary. Estimated to cost £40,000.

DONCASTER.—Following the acquisition of some land in Trafford-street, the local Salvation Army intends building headquarters at a cost of £10,000.

DORCHESTER.—The R.D.C. passed plans: Bungalow for R. King, at Tolpuddle; bungalow, for Colin Lee, Woodsford.

DUDLEY.—The Governors of the Technical College are proposing to erect new buildings at Priory-road for a new engineering section. Mr. A. T. Butler, F.R.I.B.A., architect, 31, Priory-street.

EPSOM.—The London C.C. recommend that, subject to the consent of the M.H., a site approximately for 120 houses, on the Horton estate, between Long Grove-road and Hook-road, having an area of about 13¼ acres, be sold to the Epsom U.D.C. for £3,600 for the purposes of a housing site.

FAREHAM.—The Hampshire E.C. are proceeding for a site for a secondary school for girls.

FINCHLEY.—The U.D.C. passed plans: Two houses, Hendon-avenue, and 10 houses, new street proposed to be known as Lyndhurst-park, for Aird & Baldwin, Ltd.; house, Moss Hall-grove, for the Suburban Houses, Ltd.; house, Middleway, for L. C. Gibson; houses, Nether-street, by Hillcourt-avenue, for Barratt & Co.; house, Meadway, for W. S. Gibson; 25 houses, Broughton-avenue, for A. P. Ralf; 13 houses, Broughton-avenue, for A. A. Park; two houses, Southway, for H. J. Venning.

FLEET.—Plans for the new secondary school to be erected by the Hampshire E.C. have been approved by the B.E.

FYLDE.—The R.D.C. passed plans: Two houses and shops, Bank-road, Marton, for G. Morris; eight houses, Heyes-avenue, for M. Johnson; house, Lytham-road, Warton, for A. E. Mason; bungalow, Lytham-road, Warton, for T. Clitheroe; and house and shop, Preston-road, Warton, for R. Cooper.

HALIFAX.—The suggestion by the Improvement Committee that an arcade be erected on the Woolshops site when the old property has been cleared is likely to be approved. Plan of proposed reconstruction of the Woolshops property, in association with the new public abattoirs, have been prepared by the Borough Engineer.

HANWELL.—The Middlesex C.C. proposes to erect a secondary school at Hanwell.

HATFIELD.—The R.D.C. has agreed to purchase a housing site at Balloon Corner, North Mimms, for twelve houses.

HAYES (MIDDLESEX).—The Housing Committee has recommended that a sub-committee, consisting of Messrs. Boot, Conway & Gunton, consider plans and a lay-out for a further 100 houses to be erected under the Housing (Financial Provisions) Act, 1924, and report to the Housing Committee.

HORSFORTH.—The Council has sufficient space available for the erection of 46 additional houses on roads which had been, or would have to be, constructed on the housing sites in the township, and it was decided to make application to the M.H. for sanction for these.

IPSWICH.—The Education Committee of the T.C. reported that they had agreed to the plans for the erection of a school for physically defective children. It was proposed to adopt the same type of construction as that approved in respect of Priory Heath Council School, a wooden-framed construction upon a concrete foundation, flat roofs, covered with asphalt, and steel work plastered in cement externally on metal lathing and internally with lime plaster on wood lathing. The approximate cost of the complete scheme to accommodate 200 children was £11,013. The report was adopted.

JARROW.—The Housing and Town-Planning Committee of the T.C. recommend that the Borough Engineer be instructed to prepare two modified schemes, each embracing Milton-street and Shakespeare-street area, each scheme to include provision for rehousing the dispossessed tenants—one to provide only for the removal of the air-locked portions, and the other to provide a definite open space.

LAISTERDYKE.—For the renovation of St. Mary's Church, Laisterdyke, Bradford, a sum of £300 is required, and in an endeavour to raise this a bazaar has been held.

LEEDS.—The Provincial Cinematograph Theatres, Ltd., are to proceed with a scheme of improvements at the Majestic Theatre, City-square, which include alterations to the restaurant, construct new dance hall, and ante-rooms. The plans are being prepared by W. E. Trent, architect, 123, Regent-street, W.1.

LEICESTER.—The old Guest House, in the Newarkes, is doomed. Under the widening scheme, it will disappear some time after next March, and the building lines will be set back to the new public lavatories.

LEWES.—The East Sussex C.C. has approved the recommendation for the acceptance of a tender of £365 and £60, for alterations and additions to the heating installation, and for the provision of hot-water installation for the lavatories and staff-room at the County Secondary School for Girls, Lewes. Application is to be made to the M.H. for sanction to borrow a sum not exceeding £425 in respect of the work.

LITTLEBOROUGH.—The U.D.C. are proposing to erect about 80 houses on land at Dearnley.

LONDON (CITY).—Consent and approval has been given by the affixing of the City Seal to Messrs. Cook, Son & Co. (St. Paul's), Ltd., to erect a bridge across and over the public-way of Knightrider-street, connecting 36 and 41, Knightrider-street.

LONDON (DEPTFORD).—The B.C. has received the approval of the L.C.C. to the tuberculosis dispensary proposed to be erected in Harton-street.

LONDON (DOWNHAM).—The L.C.C. recommend the expenditure of £305,000, in respect of the development of the Baring-road (No. 3) section of Downham, to cover the cost of the erection of about 491 houses and flats, including road and sewer work.

LONDON (HAMMERSMITH).—The L.C.C. recommend that £1,415, submitted by the Finance Committee in respect of the erection of a cookery centre on the site of the Wormholt-park L.C.C. school, and the supply of the necessary furniture, be approved.

LONDON (PADDINGTON).—The B.C. has received the L.C.C.'s sanction to the borrowing of £99,417 for the erection of a public hall, &c., on "The Lodge" site.

MAIDSTONE.—The T.C. passed plans: Hackney-road, bungalow, for G. Perkins; Sutton-road, house, for A. J. Webb, and house, for Mrs. B. De Campo; Buckland-road, house, for C. Levick.

MANCHESTER.—Mr. J. G. Whitelegge, Woodstock-road, Chorlton-cum-Hardy has acquired a site from the De Trafford Estates at Warwick-road South, Chorlton-cum-Hardy, where he proposes to erect 54 houses.

MARDOL.—Mr. T. Gildart, architect, of Grinskill, Shrewsbury, is preparing the plans for erection of new branch stores for the Shropshire Co-operative Society, Ltd.

MARKET HARBOROUGH.—The R.D.C. are considering the question of rebuilding the bridge at Bunker's Hill.

MERTON AND MORDEN.—Dr. Deas has submitted plans to the U.D.C. of the proposed Nelson Hospital extensions, as follows:—(*a*) A maternity home comprising one 12-bed ward, two two-bed wards and five one-bed wards, including an isolation ward; (*b*) child welfare, school and ante-natal clinics, including provision for dental room, recovery room, ophthalmic room, accommodation for orthopædic work, waiting room, &c.; and (*c*) accommodation would be provided over the maternity block for the nursing staff to be attached to the maternity home, &c. The cost of the buildings, including equipment, will be approximately £20,000.—The Surveyor submitted detailed plans, sections and estimate, which were approved, in connection with the proposed new low-level sewer. The preliminary scheme has been amended chiefly as regards the size of some of the sewers to accord with recommendations made by Mr. Midgley Taylor. The total length of the new main sewer will be approximately five miles. The estimated cost of the sewer in the Merton and Morden area is £100,000 and the portion within the Mitcham area £11,000. Application is to be made to the M.H. for sanction to borrow the sum of £111,500 to cover the cost of the proposed scheme.—The Council are to proceed with the erection of approximately 100 houses on surplus housing lands in Cannon Hill-lane and Whatley-avenue, and the Surveyor has been directed to prepare a scheme and estimate for submission in due course for the erection of such houses, and the lay-out works in connection therewith.

MIDDLESBROUGH.—The Corporation has approved plans submitted by the Middlesbrough Estate, Ltd., for the lay-out of 79½ acres of land between Park-road South and Eastbourne-road sites. Plans were also approved for a cinema, for T. Thompson, at the junction of Eastbourne and Marton Burn-roads.

MITCHAM.—The U.D.C. passed plans: H. Poulson, three roads and sewers and 116 houses, Bond-road; J. Sands, 58 houses, St. James-road, Gorringe Park; Selected Estates Co., 29 houses, Seeley-road; Lewis Crowley, shop premises, Manor-road; Charrington & Co., shop premises, junction of Beckway and Manor-road; Ranelagh Dye Works, new factory, Western-road; G. Britton & Sons, Ltd., houses and garages, Robinson-road; S. E. Musk, three houses, Inglemere-road.

MONKSEATON.—The Northumberland E.C. has decided to proceed as soon as possible with the erection

* See also our List of Contracts, Competitions, etc.

of a Council school for 300 senior pupils, on a site already secured, at Monkseaton Village.—Steps are being taken to obtain a site at East Denton for a new school.

NEWCASTLE-UNDER-LYME.—The T.C. has approved plans: House in Gallowstree-lane, by B. Harris; house in Ashfields, by S. Simner; six houses in Myott-avenue, by A. H. Furnival.

NEWCHURCH.—The E.C. recommend that a site should be acquired containing 5¼ acres of land on the Warrington side of the Council's property and belonging to the R.D.C., for the provision of an elementary school, and that building operations should commence as early as possible.

NUNEATON.—In connection with a public buildings scheme the T.C. has purchased property in Coton-road at a cost of £3,220.

ORSETT.—The R.D.C. has decided to apply to the M.H. for consent to the building of a further 200 houses.

OUSE.—Sanction of the scheme involving an expenditure of £140,000 upon work in the South Level district was received by the Ouse Drainage Board.

PETERSFIELD.—It is proposed by the Old Churcherians to erect a new block of buildings at Churcher's College as a memorial, at an estimated cost of £3,000.

PLYMOUTH.—The M.H. has held an inquiry into the application of the Corporation for sanction to borrow £11,200 for the provision of public baths and wash-houses on Corporation land at the rear of the Stone-house Town Hall.

PORTSMOUTH.—The Eastney Wesleyans are proposing to erect a new chapel on a site at Highland-road, Eastney, estimated to cost £12,000. Plans are to be prepared by A. Brocklehurst & Co., architects and surveyors, Norfolk-street, Brown-street, Manchester.

PRESSALL.—For the purpose of erecting workingmen's dwellings, the U.D.C. has decided to purchase, at a cost of £850, about two acres of land off Salisbury-avenue, Knott End.

PRESTON.—The Fylde Preston and Garstang Joint Hospital Board, Walker-street, Preston, are proposing to make extensions to the Elswick Small-pox Hospital by making provision for a new ward of 14 beds, and extension of the administration block. The Borough Engineer has prepared the plans.

PWLLHELI.—Mr. N. Harold Hughes, of the Diocesan Offices, Bangor, is to prepare plans for the erection of a new vicarage on a site in Nevin-road.

RICHMOND.—At a special meeting of the Richmond Town Council the members discussed privately the question of a loan for electricity purposes, and eventually it was decided to accept a loan of £11,500 at 5½ per cent. interest.

ROCHDALE.—Mr. Robert Martin, diocesan architect, 90, Deansgate, Manchester, is preparing a scheme for the erection of a new church and rectory in Fury-road, Rochdale, for the Rev. H. Edwards, of St. George's Church.

ROTHERHAM.—The R.D.C. has resolved that the plans submitted by Mr. Totty, the architect, in respect of the 22 houses proposed to be erected at Swallownest, on the lower portion of the land let for allotments, be approved and adopted, subject to the site being approved by the committee, and that the necessary steps be taken to erect these houses to replace those to be demolished under the Swallownest Reconstruction Scheme.—It has been resolved that application be made to the M.H. for approval to the erection by the Council of a further number of houses and the construction of road works in connection therewith, to complete the site at Catcliffe.—The Engineer has presented the plans of a new school for Bramley and Wickersley, situate in Flanderwell-lane, Bramley, to accommodate 460 children, which were approved.

ROWLEY REGIS.—The U.D.C. has decided to build a school and a maternity centre on an estate where houses are to be erected.

SADDLEWORTH.—The Housing Committee has decided to take steps to erect 10 more houses at Cobbler's Hill, Delph.

SCARBOROUGH.—Scalby Parochial Church Council's application for a site for a new church has been considered by the Corporation. One suggested site abuts on the new golf course near the Sanatorium in Cross-lane and another is north of the Barracks, and the Property Committee are to be authorised to negotiate for the sale of one of such sites.—Approval has been given to a decision of the Property Committee with regard to the purchase by the Corporation of the area of vacant land on the Esplanade between Esplanade-road and Avenue Victoria.

SLOUGH.—The U.D.C. passed plans: House in Langley-road, for Mr. Hill; house in Dolphin-road, for H. D. Bowyer; two houses in Wexham-road, for J. & W. Hibberd; factory extensions, for Naylor Bros.; two houses in New-road, The Crescent, for J. A. Simons; and a house in Littledown-road, for C. Simmons.

SOUTHPORT.—An important scheme for the further development of Princes Park on the seaward side, which has been prepared by the Borough Engineer, A. E. Jackson, on the instructions of the Parks and Foreshore Committee, provides for the making-up of the existing road through the park from Pleasure-land to the Marine-drive, so as to make it possible for light traffic to go through the park; for the erection of a new floral hall or summer hall for concerts, &c., with sunken gardens between the hall and the road; and for the construction of a new bathing lake at an estimated cost of £60,000, together with a motor park and cafe.—Hesketh estate, Southport, has just been sold for nearly half a million sterling. The estate consists of the north-eastern portion of the town, and comprises some 3,500 houses, shops, &c. The estate has been purchased by Duncan B. Gray & Partners, Ltd., of Mount-street, London.

STAFFORD.—The R.D.C. has approved the following: Semi-detached villas at Stockton and Baswick, for Skelthorne & Jervis; pair of houses in Silkmore-lane and one in Rickerscote-road, for T. B. Follows.

STAINES.—The R.D.C. passed plans: Bungalow, Oaks End, Stanwell, for P. R. Smith; cottage, Clock house-lane, Bedfont, H. J. C. Dean; house, Cranford Village, J. C. Cook; bungalow, Bath-road, Colnbrook, Mr. Wiggins.

STALHAM.—A parish meeting has confirmed the steps that have been taken by the Parish Council with reference to the enlargement of the Town Hall. Provision will be made for a permanent platform, with dressing-rooms underneath. The plans have been made by O. J. Batchelor.

STOKE-ON-TRENT.—The Housing Committee recommended that application be made to the M.H. for approval to the acquisition of the Cornhill site, Norton, for housing purposes, and the Committee also for the acceptance of a tender, amounting to £25,920, for the erection of 48 houses on the Acres Wood-lane site, Burlsem.—The M.H. has sanctioned the borrowing of £9,204 for the erection of a further 22 houses on the Fletcher-road site, Stoke, and sanction to the borrowing of £34,915 for the erection of 63 houses on the Northwood Park site.

STRATTON AND BUDE.—The U.D.C. are to invite tenders for the erection of tea rooms, shelters and conveniences, the estimated cost of which is £2,100.

SWANLEY.—The members of the Horticultural College, Swanley, are to carry out a scheme for rebuilding the botany laboratory.

TAMWORTH.—The B.G. have appointed architects to prepare plans and estimates for the conversion of the old infirmary to provide accommodation for male casuals on the cubicle system.

THORNE.—A Board of Trade enquiry has been held at Doncaster into an application by the West Riding C.C. for permission to construct a new bridge, 30 ft. wide, across the Dutch river.

THORNTON.—The Housing and Town-Planning Committee have approved the following plans: Five pairs of semi-detached houses in Cleveleys-avenue, for J. Cryer & Sons; pair of semi-detached houses and garages in Victoria-road, for W. Eastwood; pair of semi-detached houses in Ellerbrook-road, for Hawthorne & Bloor; dwelling-house in Beach-road, for A. A. Holt; pair of semi-detached bungalows in Ryden-avenue, for Whelan & Blomley; detached houses in Bourne-road, for the United Alkali Co., Ltd.; and seven pairs of houses in Fleetwood-road, for J. Cryer & Sons.

TONBRIDGE.—The Kent C.C. has stated that it was necessary that the Great Bridge, Tonbridge, should be widened. The cost is estimated at £4,500. The C.C. has accepted a tender at £3,566 14s. 11d. for the scheme.

TRURO.—The Cornwall Territorial Army Association has made application to the War Office to include in the next Army Estimates a sum of £4,248, the estimated cost of a new drill hall which it is proposed to erect.

TYNEMOUTH.—The T.C. has decided to spend another £6,600 upon developments at the Long Sands Bathing Pool.

TYRONE.—The C.C. propose to spend £1,800 on repairing five damaged bridges.

UXBRIDGE.—The R.D.C. passed plans: Twelve bungalows, Copperfield-avenue, Hillingdon; shop with living accommodation, Manor Farm Estate, Northolt; house, Uxbridge Manor Estate, Hillingdon; 62 bungalows, Uxbridge Manor Estate, Hillingdon; bungalow, Hercies-road, Hillingdon; six bungalows, main road, Cowley Peachey; two houses, Peachey-lane, Cowley.

WAKEFIELD.—The Kiosk Café in Radcliffe-place is to be reconstructed. Tenders are to be invited.

WALTHAMSTOW.—The U.D.C. passed plans: Eight garages, rear of 172, Hale End-road, E. Bird; two houses, Whipps Cross, Kind & Co.; new chapels, St. George's Church, Shernhall-street, Crawley & Co.; five houses, Spruce Hills-road, W. C. Houchin; 92 houses, Abbotts-crescent, Highams-park, West Bros. & Pettet; two houses, Malvern-avenue, A. E. Wood; bungalow, St. Andrew's-road, H. J. Maddocks; 10 houses, Wadham-road, H. Hawthorn.

WELLINGTON.—The U.D.C. has approved plans: Eleven more houses on the Church Fields site to the following: Mrs. M. J. Woodgate, C. Grabham, H. J. Langham, R. Nation, W. J. Webber, J. Hutchings, W. C. Saunders, W. C. Allen, A. J. Buttle, A. J. Hayes, Mrs. B. Vickery.

WELSHPOOL.—The question of accommodation for the staff of the Montgomery County Council has been approved by the Council. The scheme is to cost £10,000.

WEM.—The Independent Order of Oddfellows are proposing to erect 24 houses on the Shrubbery site. Plans by R. Matthews, architect and surveyor, Westminster Chambers, Nantwich.

WEST HARTLEPOOL.—The T.C. has sanctioned plans: P. H. Gamlen, house, rear of "Chez Nous," Stockton-road; J. J. Fox, bungalow, Oakland-avenue; T. Whitear, bungalow house and shop, Stratford-road; C. Longden, house, Elwick-road and Eldon-grove.

WHITEHILL.—The Standing Joint Committee of the Hampshire C.C. has concluded negotiations for a site for a new police station, at a cost of £645.

WINLATON.—The Blagdon Council has approached the M.H. for permission to erect an additional 90 houses at Bleach-green, near Winlaton.

WOKING.—The local authority have approved the following new building plans: Capt. Mawe, house, Upper St. John's-road; L. H. Fosbury, bungalow, Apers Estate, Westfield; A. Shrubb, house, Thornash-road, Horsell; W. H. Elkin, house, Star-hill; C. G. B. Fulk, house, Star-hill; A. Last & Son, shops and garages, Railway-approach, Woking.

WOOD GREEN.—The U.D.C. recommend the erection of 85 houses on the White Hart-lane estate.—Regarding shop sites, the Clerk reported correspondence with the Ministry, and the Surveyor indicated on the lay-out plan the shopping area previously under discussion, and the Council resolved that the Clerk negotiate for sale of sites for shops on the White Hart-lane estate.—The Clerk and Surveyor reported on an interview with a representative of the Salvation Army, and indicated on the lay-out plan a suitable corner site for disposal to the Army for erection of a hall, also on the White Hart-lane estate.—Plans passed: Redvers-road, eight garages, by H. W. Couchman, for J. Gower; Alexandra Park-road, four houses and garage, for S. G. Goulding.

Mr. Arthur Erith.

We regret to record the death of Mr. Arthur Erith, at the age of 56. Mr. Erith was general manager of Messrs. Erith & Co., Ltd., builders' merchants.

A Play by Mr. Sydney J. Holloway.

Mr. Sydney J. Holloway, the author of the new comedy "Hitch Your Waggon ——," which is being produced by Mr. Milton Rosmer, at the "Q" Theatre, on December 6, is a member of the firm of Messrs. Holloway Bros., Ltd., Grosvenor-road, S.W.1. Mr. S. Holloway is the author of "Building Ancient and Modern," a book which, published a year or so ago, set forth the history and activities of his firm.

Foundling Hospital Sale.

The Foundling Hospital site has been purchased by "The Foundling Estates, Ltd.," from the Governors of the Hospital, the total purchase price amounting to £1,650,000. The sale includes the Foundling Hospital and Brunswick-square, Mecklenburgh-square, a considerable portion of Guilford-street, Bernard-street, Coram-street, Compton-street, Handel-street, Kenton-street, Marchmont-street, Hunter-street, Tavistock-place, Heathcote-street, Millman-street, and Mecklenburgh-street.

The transfer of Covent Garden Market to the Foundling Hospital site in Bloomsbury is to be the subject of an application to Parliament next session.

American Building Agreement.

An agreement between employers and workers in the building trade has, it is understood, been concluded in Chicago. The main clauses of the agreement are:—

(*a*) There shall be no limitations as to the amount of work a man shall perform during his working day.

(*b*) No restriction of the use of machinery, tools, or appliances.

(*c*) No restriction of the use of any raw or manufactured material, except prison-made.

(*d*) No person shall have the right to interfere with workmen during working hours.

(*e*) Use of apprentices shall not be prohibited.

(*f*) The foreman shall be the agent of the employer.

(*g*) A workman is at liberty to work for whomsoever he sees fit, but he shall demand and receive wages agreed on by the joint arbitration board in this trade in all circumstances.

(*h*) The employer is at liberty to employ or discharge whomsoever he sees fit.

Workmen are given the right to refuse to work with non-union men engaged in building construction or for builders employing non-unionists on any other job in Chicago, provided a union exists and is affiliated with the Building Trades Council.

Central Valuation Committee.

The second meeting of the Central Valuation Committee took place recently at the offices of the Ministry of Health, Whitehall, S.W.1. The Committee has recently been set up under section 57 of the Rating and Valuation Act, 1925, to promote uniformity and remove inequalities in the principles and practice of valuation for local rates throughout England and Wales. The Committee had before them a report by their Executive Committee with regard to matters upon which local authorities in the country may desire guidance in preparing the new valuation lists, and in particular as to the following two questions which the Minister of Health in his speech at their first meeting asked the Committee to consider: (1) the general level or standard of value to be adopted in compiling the new lists; and (2) the extent to which, in present circumstances, it is necessary or desirable to engage the services of expert valuers.

The Committee adopted the recommendations of the Executive Committee with some amendments, and directed that the recommendations as amended should be submitted to the Minister of Health with the least possible delay. It is understood that the Minister will circulate the Committee's recommendations and suggestions before the close of the present year.

PRICES CURRENT OF MATERIALS

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry — Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 5 6
Second Hard Stocks	3 19 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 13 3	Best Blue Pressed Staffs	9 5 0
Do. grooved for Plaster	2 15 3	Do. Bullnose	9 15 0
Do. Bullnose	3 8 3	Blue Wire Cuts	7 5 0
Best Stourbridge Fire Bricks—			
2½ in.	8 11 0	3 in.	10 3 0
GLAZED BRICKS—			
Best White Ivory, and Salt Glazed Stretchers	23 0 0	D'ble Str'tch'rs	31 10 0
		D'ble Headers	28 10 0
		One Side and two ends	32 10 0
Headers	22 10 0	Two Sides and one End	33 10 0
Quoins, Bullnose and 4½ in. Flats	29 10 0	8 plays and Squints	31 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 4	4 in. " "	3 6

	s. d.	
Thames Ballast	10 6	per yd.
Pit Sand	13 9	" "
Thames Sand	14 6	" "
Best Washed Sand	14 6	" "
¾ in. Shingle for Ferro-Concrete	12 9	" "
½ in. " "	14 0	" "
¾ in. Broken Brick	11 6	" "
Pan Breeze	7 6	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test 61s. alongside at Vauxhall in 80-ton lots. £3 8 0 to £3 13 6

Ferrocrete per ton extra on above	0 10 0
Super Cement (Waterproof)	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Strapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	3 0 9
Chalk Lime	3 0 9
Best Ground Blue Lias Lime	2 13 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube — s. d. 2 9½

Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube — 2 11½

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube — 4 4

Do. do delivered on road wagons at above stations, per ft. cube — 4 5

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE—

	s. d.
Delivered at any Goods Station, London.	
Random blocks from 10 ft. and over	P. ft. cb. 17 0
Sawn two sides	" 27 0
Sawn three or four sides	" 32 0

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super.)	Per ft. super 5 6
6 in. rubbed two sides, ditto	" 6 0
2 in. sawn two sides slabs (random sizes)	" 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes)	" 1 6½
1½ in. to 2 in. ditto, ditto	" 1 4

HARD YORK—

Delivered at any Goods Station, London.	
Scappled random blocks	Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super)	Per ft. super 5 1½
6 in. rubbed two sides, ditto	" 6 1½
4 in. sawn two sides slabs (random sizes)	" 2 10
3 in. ditto ditto	" 2 1½
2 in. self-faced random flags	Per yd. super 9 0

CAST STONE.

Delivered in London Area in full van loads, per ft. cube:—Plain, 8s. 6d.; Moulded, 9s. 6d Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£28 0	3 × 6	£21 0
4 × 9	25 0	3 × 11	25 0
4 × 8	24 0	2 × 11	25 0
4 × 7	23 0	3 × 9	24 0
3 × 8	21 0	2½ × 9	23 0
3 × 7	20 0	3 × 4½	22 0
2½ × 7	20 0	3 × 4	22 0

PLANED BOARDS.

1 × 11	£27 0	1 × 9	£24 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	20/-	1¼	31/-
¾	22/-	1½	34/-
1	25/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	Inches.	per sq.
1	25/-	¾	16/6
1¼	31/-	¾	19/-
1½	34/-	1	24/-

MATCHING (BEST).

BATTENS.

Inches.	s. d.
¾ × 2	2 6 per 100 ft.

SAWN LATHS.

Per bundle	0 2 4

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscoat, per ft. cube	0 16 0 to	0 18 0
Dry American and /or Japanese Figured Oak, ft. cube	0 15 0 to	—
Dry American and/or Japanese Plain Oak, ft. cube	0 11 0 to	0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 16 0 to	0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 18 0 to	1 1 0
Dry Cuba Mahogany, ft. cube	1 4 0 to	1 10 0
Dry Teak, ft. cube	0 13 0 to	0 15 0
Dry American Whitewood, ft. cube	0 11 0 to	0 14 0
Best Scotch glue, per cwt.	4 10 0 to	—
Liquid Glue, per cwt.	4 7 0 to	5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

Delivered at London rate stations in full truckloads of not less than 4 tons.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 12 6
Ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Hip and valley tiles (per dozen) Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
" Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅝ in. to ⅞ in.	10 15 0
⅜ in.	11 0 0	1 in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Black Gas	60 %	50 %	60%
Galvanised Gas	45 %	40 %	50%
Blue Water	55 %	45 %	55%
Galvanised Water	38⅓ %	35 %	45%
Red Steam	50 %	40 %	50%
Galvanised Steam	32½ %	30 %	40%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/3½	11½d	3½d.
3½ in.	1/4½	1/1½	3½d.
4 in.	1/6	1/3	3½d.
4½ in.	1/7½	1/4½	4½d.
5 in.	1/10½	1/6½	5½d.

O.G. GUTTERS.

3 in.	1/3	1/4½	3½d.
3½ in.	1/8	1/4½	3½d.
4 in.	1/9½	1/4½	3½d.
4½ in.	1/11½	1/7½	4½d.
5 in.	2/4½	1/10½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/10½	1/3	1/9½
2½ in. "	2/0½	1/4½	2/1½
3 in. "	2/6	1/9	2/7½
3½ in. "	2/11½	2/0½	3/0½
4 in. "	3/5	2/6½	3/8½

L.C.C. COATED SOIL PIPES—London Prices, ex Works.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
2 in. per yd. in 6 fts. plain	3 3	2 4½	2 10
2½ in. "	3 9	2 7½	3 7
3 in. "	4 6	2 10	4 2½
3½ in. "	4 11½	3 7	4 11½
4 in. "	5 5½	4 0½	5 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
3 in. per yd. in 9 ft. lengths	4 4	5 1	8 0½
4 in. " "	6 2	5 8	10 0
5 in. " "	7 2	10 10	17 1
6 in. " "	8 6	13 2	21 9

Gaskets for jointing, 38/6 per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON— Common Bars	13 0 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 5 0	..	15 5 0
Staffordshire Marked Bars	16 5 0	..	17 5 0
Mild Steel Bars	10 0 0	..	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	..	11 0 0
Hoop iron, basis price	12 0 0	..	13 0 0
" Galvanised	27 0 0	..	28 0 0
Soft Steel Sheets, Black— Ordinary sizes to 20 g.	13 5 0	..	14 5 0
" " " 24 g.	14 5 0	..	15 5 0
" " " 26 g.	16 5 0	..	17 5 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	..	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 10 0	..	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 10 0	..	20 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—

Ordinary sizes, 6 ft. to 9 ft. to 20 g.	18 10 0	..	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	19 0 0	..	20 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	22 0 0	..	23 0 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	22 0 0	..	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 0 0	..	26 0 0
Best Soft Steel Sheets, 26 g.	25 10 0	..	26 10 0
Cut Nails, 3 in. to 6 in.	19 0 0	..	20 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	41 10 0
Pipe in coils	4 0 0
Soil Pipe	45 0 0
Compo Pipe	46 0 0

NOTE—Country delivery, 30s. per ton extra lots under 3 cwt., 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	28 0 0	—
Do., ex country carriage forward per ton	29 0 0	—

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 1
Strong sheet "	1 0
Thin "	1 1
Copper nails "	2 3
Copper wire "	2 4

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	70/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1½ in.	1¼ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1½ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1½ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- "

TIN—English Ingots, 2/10 per lb. SOLDER—Plumbers 1 S. Tinmen's 1/6, Blowpipe 1/7 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil,	in pipes per gallon	0 3 0
" " "	in barrels	0 3 1
" " "	in drums	0 3 3
Boiled " "	in barrels	0 3 3
" " "	in drums	0 3 6
Turpentine	in barrels	0 5 3
"	in drums (10 gall.)	0 5 5
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	50 15 0
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms, "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J." Brand and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	70 5 0
Red Lead, Dry (packages extra)	per ton	42 0 0
Best Linseed Oil Putty	per cwt.	0 15 0
Filocel	"	0 15 6
Size, XD Quality	"	0 3 6

Continued on next page.

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PRICES CURRENT OF MATERIALS (*contd.*).

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ..	3½d.	32 oz. fourths	7½d.
15 „ thirds	4½d.	32 „ thirds	9½d.
21 „ fourths ..	4½d.	Obscured Sheet, 15 oz...	3½d.
21 „ thirds	5½d.	„ „ 21 „ ..	5½d.
26 „ fourths ..	5d.	Fluted 15 oz. 6½d., 21 oz.	9½d.
26 „ thirds	7½d.	En'lled 15 oz. 5½d., 21 oz.	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
Rolled plate	4½d.
Rough rolled	5½d.
Rough rolled	6d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	6½d.
Ditto, tinted	9½d.
Rolled Sheet	6½d.
White Rolled Cathedral	6½d.
Tinted Do.	8½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon. £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Copal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	6
Fine Copal Flatting	ditto	1	0	6
Hard Drying Oak	ditto	0	18	0
Fine Hard Drying Oak	ditto	0	19	0
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	2	0
Best ditto	ditto	1	12	0
Best Japan Gold Size		0	12	6
Best Black Japan		0	10	6
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	6
Berlin Black		0	14	6
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebine		0	9	0
Quirass Black Enamel		0	7	0

THE STRENGTH OF STEEL

AT a meeting of the Royal Scottish Society of Arts, held recently in Edinburgh, a communication was made by Dr. E. M. Horsburgh on "The Structure and Strength of Steel." Dr. Horsburgh said the great commercial importance of steels suitable for cold working was now universally recognised. This might be typified by the sorbitic steels which were used in wire-drawing. The lecturer explained, by means of characteristic curves, the great differences between the property of the structural and the sorbitic steels. He also referred to the methods of preparing them and their differences of structure as shown by the microscope. Another subject of great importance was response to fatigue of steel subject to live load. Machines were now on the market which enabled fatigue tests on metal to be carried out in a satisfactory manner.

HOUSING PROGRESS IN SCOTLAND

THE following figures issued by the Scottish Board of Health, Edinburgh, show the progress that has been made in State-aided housing schemes in Scotland to October 31, 1926:—

	Completed.	Under Construction.
1919 Act	25,520	30
Private Subsidy Schemes	2,324	—
Slum Clearance Schemes	4,108	2,692
1923 Act—		
By Local Authorities..	2,556	1,252
By Private Enterprise	7,606	2,924
1924 Act—		
By Local Authorities..	3,654	12,878
By Private Enterprise	216	201
Demonstration Houses..	17	—
	46,001	19,977

Appointments.

The Kirkcaldy District Committee of Fife County Council has appointed Mr. Anthony Walker, resident engineer on the Great North-road, Newtonmore, to road surveyor, in place of the late Mr. G. Donaldson. Messrs. J. S. Campbell, resident engineer, Coatbridge, on the Edinburgh-Glasgow road, and J. Wedderspoon, have also been appointed to assistant road surveyors, Kirkcaldy.

THE SCOTTISH BUILDER

ART IN ARCHITECTURE

IN the course of an address to the Edinburgh Architectural Association, Sir George Washington Browne, P.R.S.A., said that within his time there had been a marked change in the manner of building, and three new types of structure had arisen—the skyscraper, the bungalow, and the housing scheme—the two latter within the last decade. Alluding to the bungalow, Sir George said it had been described as a one-story house built to admit air, light, and rain-water—and a domestic building on which the builders put a low roof but a high price. Why these attractive-looking houses should be the butt of witticisms he did not know. On the subject of housing schemes the lecturer said they were nothing short of a national calamity. These having cost nationally and municipally as much as the pre-war National Debt, who would say how much of this had been nothing more or less than a subsidy to give building operatives uneconomic wages and building contractors uneconomic profits resulting in uneconomic prices? It had strewn the country with erections which were generally wholly alien to their soil and situation, which seemed to have come from nowhere and been set down nowhere. Under three such chilling influences as State control, standardisation, and mass production, art was well nigh impossible.

NEW BUILDINGS IN SCOTLAND

Troon.—HOUSES.—The Housing Sub-Committee of the Town Council has approved of a lay-out plan for their new housing scheme at Logan-drive and Muirhead-crescent, which still comprise 52 two-apartment houses and 52 three-apartment houses.

Johnstone.—HOUSES.—The Dean of Guild Court has passed plans for the erection of 13 houses on a site between Quarrelton-road and Floors-street, for the Town Council.

Huntly.—CHURCH.—A suite of halls is to be erected for Huntly Parish Church, Aberdeenshire, at the south end of the church, at a cost of close on £3,000.

Giffnock.—CHURCH.—A bazaar has been held in the McClellan Galleries, Glasgow, in aid of the funds needed for the completion of the building of Giffnock Parish Church.

Edinburgh.—BUILDING.—The Dean of Guild Court has sanctioned the following plans:—Edinburgh Education Authority—playshed at St. Ninian's (R.C.) School, Restalrig-road, and a boys' cloakroom at James Clark school, St. Leonard-lane; Mr. G. Primrose, two bungalows at House o' Hill Gardens, Blackhall; Mr. G. Romanes, house at Barnton-avenue East, Davidson's Mains; and Messrs. Murray & Dickson, double villa at Cluny Gardens.—Also among the plans passed was a scheme for the erection of buildings for the Governors of the Astley-Ainslie Institution at Southbank, Morningside, Edinburgh. The Institution will be utilised for convalescent patients from Edinburgh Royal Infirmary. The scheme will cost £150,000.

Ballantrae.—HALL.—The committee entrusted with the carrying out of the arrangements for the new hall at Ballantrae have accepted offers for the building. A site on the glebe has been purchased, and the plans for the building have been prepared by Mr. Allan Stevenson, Ayr. The cost will amount to £4,000.

Dunbar.—BUILDINGS.—The Town Council has unanimously decided to proceed with new municipal buildings.

Edinburgh.—BRIDGE.—The Streets and Buildings Committee of the Town Council has considered a motion by Councillor Crawford for the provision of a bridge to connect Bothwell-street and Albion-terrace. The Committee has decided to visit the site before making any recommendations on the matter. The streets which it is proposed to join are in the neighbourhood of Easter-road, and the bridge would have to be carried across the railway between Leith-walk and Piershill Stations.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons', Bricklayers' Plasterers'.
Aberdeen	1/8	1/8½	1/8	1/8	1/8	1/8	1/7	10½d. to 1/1
Airdrie	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/8
Alexandria	1/8	1/8	1/8	1/8	1/8	1/8	—	1/2½ to 1/3½
Arbroath	1/7	1/7	1/7	1/7½	1/7	1/7	1/5½	1/1½
Ayr	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3
Bathgate	1/8	1/8	1/8	1/8½	1/8	1/8	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Coatbridge	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3 to 1/3½
Dumbarton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dumfries	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dundee	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Dunfermline	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Edinburgh	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/3½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3
Galashiels	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Glasgow	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Greenock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/0½ to 1/3½
Hamilton	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkcaldy	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/8	1/8	1/8	1/9	1/8	1/8	1/6	1/0 to 1/3
Leith	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Motherwell	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Perth	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3
Stirling	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Stirlingshire (Eastern District)	1/8-1/10	1/8 1/10	1/8	1/9	1/7	1/8	1/6½	1/3½
Wishaw	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½

*The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 922]

CURRENT PRICES FOR BUILDING WORK IN LONDON

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	38	0	
Add if in underpinning in short lengths	" "	7	0	
Add if in floors 6 in. thick	" "	3	3	
Add if in beams	" "	3	9	
Add if aggregate 1 : 2 : 4	" "	10	0	
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6	

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	8	6
½ inch on flats in two thicknesses	" "	6	3
Angel fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

York stone templates fixed	per foot cube	13	0	
York stone sills fixed	" "	22	0	
Bath stone and all labour fixed	" "	10	6	
Portland stone fixed	" "	20	0	

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9	
Do 20 in. × 10 in. Do. Do.	"	80	9	
Do. 24 in. × 12 in. Do. Do.	"	90	0	

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	5	0	
Do. joists	" "	5	6	
Do. roofs, floors, and partitions	" "	6	0	
Do. trusses	" "	8	6	

	¾"	1"	1¼"	2"
Deal rough close boarding per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers per		50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

	¾"	1"	1¼"	1½"
Deal-edges shot per sq.		44/6	53/-	60/6
Do. tongued and grooved "		49/-	57/6	65/-
Do. matchings "	45/-	51/-		
Moulded skirting, including backings and grounds per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super.	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1¼ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	" "	3	0

DOORS.

	1¼"	1½"	2"
Two-panel square framed per ft. sup.	2/1	2/4	2/6
Four-panel Do. "	2/5	2/8	2/11
Two-panel moulded both sides "	2/8	2/11	3/2
Four-panel Do. Do. "	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		p.	d.
Deal wrot moulded and rebated	per foot cube	14	0

	1"	1¼"	1½"
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers "	1/4	1/6	1/9
Add if cross-tongued "	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail : average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roof work	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	57	6
Do. Do. in flats	"	56	6
Extra labour and solder in coated cesspools	each	6	6
Welf joint	per ft. run	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	4
Do. Do. Sirapite	" "	2	9
Do. Do. Keen's	" "	4	0
Add sawn lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, &c., for suspended ceilings.)			
Portland cement screed	per yard sup.	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	8½
26 oz. Do.	" "	1	0
Obscured sheet	" "	1	1
¼ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	10½
¼ in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10 % on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.

ABINGDON.—Extensions to administration block of the Abingdon Joint Hospital, for the Board. Messrs. J. G. T. West & Son, FF.R.I.B.A., architects; quantities by Messrs. H. Cooper & Sons, Reading:—

Thatcher & Sons, Abingdon	£2,750	0
Barrett & Sons, Wantage	2,727	4
Blake Bros., Didcot	2,544	0
P. A. & G. Randall, Abingdon	2,430	0
T. H. Kingerlee & Son, Oxford	2,325	0
Kirby & Sons, Dorchester	2,310	0
Buckle & Sons, Abingdon	2,177	0
‡A. Cox & Sons, Ltd., Abingdon	2,067	0

ADWICK-LE-STREET.—164 houses, also street works, sewers, surface water drains, and water supply, in connection with the said houses in Doncaster-lane, Adwick-le-Street, for the U.D.C. Surveyor, Village-street:—

(*a*) Flowitt & Gilbert	£19,920	0	0
(*b*) Flowitt & Gilbert	23,560	0	0
(*c*) Jaques & Greaves	28,458	0	0
(*d*) Knights Contractors, Ltd.	968	0	6
(*e*) Swift Bros. & Haslam	7,218	0	0
(*f*, *g*, *h*, *j*) Knights Contractors, Ltd.	3,290	17	4

BARKING.—Paving with limestone, tar-paving the whole of the playgrounds (approximately 2,100 yds. super.), at the Park Central School, for the Barking Education Committee. Mr. C. J. Dawson, F.R.I.B.A., Authority's Architect, Clock House Chambers:—

B. H. Hale, Romford	£717	12	0
Eagiton & Cochrane, Ltd., Kent	715	12	6
Constable, Hart & Co., Ltd., London	708	15	0
The Durnford Construction Co., Ltd., Bristol	649	10	0
A. C. W. Hobman & Co., Ltd., South Bermondsey	633	0	0
L. Terry & Co., Ltd., Kent	630	0	0
The Black Rock Quarries, Ltd., Bristol	548	12	0
*J. Smart & Son, London	489	0	0

BIDEFORD.—Rebuilding a portion of Edgehill College, which was destroyed by fire:—

*E. Ellis & Son.

BIRKENHEAD.—Erection of the new Cole-street Council School, for the E.C.:—

*J. A. Milestone & Son, Wallasey £19,976

BUILTH.—Re-erection of the following bridges, for the R.D.C.: (1) Glandulas Cartbridge, in the parish of Llandulas; (2) Cilant Cartbridge, in the parish of Llanddewi Abergwessin; (5) Nantyrwch Cartbridge, in the parish of Llanddewi Abergwessin; (4) Tavernypridd Footbridge, in the parish of Penbuallt. Mr. T. V. Williams, engineer and surveyor, Strand Hall Chambers, Builth Wells. Quantities by the engineer:—

Tavernypridd Bridge—
*The Bridge and Engineering Co., Banbury, Oxon £436 19

Glandulas Bridge—
*E. Richards & Sons, Llanwrtyd Wells 190 0

Cilant Bridge—
*E. Richards & Sons, Llanwrtyd Wells 161 0

Nantyrwch Bridge—
*E. Richards & Sons, Llanwrtyd Wells 145 0

BRADFORD.—Electricity transformer sub-station at Toller-lane, for the Electricity Committee:—

‡Jeptha Thornton & Sons.

BRADFORD.—Electricity transformer chamber at Thornton-road, for the Electricity Committee:—

‡Jeptha Thornton & Sons.

BURNTISLAND. — Alterations at the public slaughter-house, for the T.C. Mr. J. A. Waddell, Burgh Surveyor:—

Masons' work—

John Jackson & Son, Burntisland	£194	13	7
*Fife Building Co., Cowdenbeath	193	16	0½
G. Colvin, Kirkcaldy	183	12	1½

CASTLEFORD.—Renovation work to the interior of the Town Hall for the U.D.C.:—

*J. T. Watson.

CHESHUNT.—Motor fire-engine station at Turner's Hill, for the R.D.C. Mr. J. E. Sharpe, Engineer and Surveyor, Manor House:—

W. T. E. Duncan, Waltham Abbey	£577
A. J. Maxfield & Son, Waltham Cross	538
W. O. Porter, Ware	524
E. Boxall, Tottenham	519
H. Calnan, Cheshunt	510
A. M. Turner, London	489
*R. Archer & Son, Cheshunt	400

ESSEX.—600 ft. of retaining wall on the northern site of the Audley End-Royston main road, for the C.C.:—

*J. S. Norton, Halstead £3,487 14 6

FINCHLEY.—Interior renovations at the dispensary for the Middlesex C.C.:—

Pellow & Wright, Finchley	£148	0
*T. C. Brownsell, Finsbury Park	133	16

HASSOCKS.—For detached Tudor villa at Hassocks, Sussex. Mr. Archibald J. McLean, F.R.I.B.A., chartered architect, structural engineer, 3, Palace-place, Brighton:—

T. & H. Bartlett	£1,493	0	
W. & A. Elliott	1,488	0	
Fowler Bros.	1,469	0	
Norman & Burt	1,448	0	
F. T. Wilson & Sons	1,447	10	
T. E. & J. Muzzell	1,420	0	
Gates & Sons	1,350	0	
T. White (timber in oak)	1,333	0	
Do. (timber in deal)	1,300	0	
Architect's estimate	1,250	0	

HATFIELD.—Twelve more houses at Little Heath, for the R.D.C.:—

*Shadbolt & Nash £5,518 10

HAYES (MIDDLESEX).—Erection of 100 houses, for the U.D.C.:—

*Butler & Sons, Birmingham £500,500

HUDDERSFIELD.—Bungalow in Heaton-road. Mr. J. Ainley, architect and surveyor, 55, New-street, Huddersfield:—

Mason's work—
*Walker & Crossley, Golcar £365 0

Joiner's work—
*T. H. Pogson, Milnsbridge 142 10

LIVERPOOL.—Eighteen tenement dwellings on the Pitt-street area, for the Housing Committee. Acting Director of Housing, Municipal Buildings, Dale-street:—

*Eadie, Towers & Co., Wolverhampton £10,458

LONDON.—Additional repairs in connection with the painting of Harper-street L.C.C. school, Southwark, for the L.C.C.:—

*W. J. Dixon & Son, Bermondsey.

LONDON.—Cleaning, painting and repair work at the children's care and divisional medical offices, 37, Stepney-green, E., for the L.C.C.:—

*Marrable Bros., London £317 10

LONDON.—Additional office accommodation at the Borough Hall, Royal-hill, Greenwich, for the B.C. Borough Engineer and Surveyor:—

W. Banks, Greenwich	£525
W. Bickerton, Brockley	495
Wm. Mills & Sons, Ltd., Blackheath	485
*A. G. Shorter, Greenwich	475

LONDON.—Public baths and washhouses at Trafalgar-road, East Greenwich, for the Greenwich B.C. Messrs. Horth & Andrew, architects, Whitefriargate, Hull; quantities by Messrs. Waggett & Bradford, 12, Regent-street, S.W.1:—

James Carmichael, Ltd.	£137,050
Chessums, Ltd.	134,471
J. W. Falkner & Sons, Ltd.	134,200
Geo. Parker & Sons	130,295
F. F. Foster & Co.	124,443
E. A. Roome & Co., Ltd.	124,185
Wm. Blay, Ltd.	123,062
*Holliday & Greenwood, Ltd.	121,908

(All of London.)

MADELEY (STAFFS). — Building a storeroom and shed on land near the L.M. & S.Rly. bridge at Madeley, for the Newcastle-under-Lyme R.D.C. Mr. W. Hemmings, surveyor, Hill Chorlton, near Newcastle, Staffs. Quantities by the architect and surveyor:—

Joseph Cooke, Stoke-on-Trent	£668	0	0
Ball & Robinson, Stoke-on-Trent	657	0	0
Ward & Bailey, Stoke-on-Trent	628	19	6
Maddock Bros., Stoke-on-Trent	592	14	9
J. Bennett, Keele	569	0	0
†Thos. Phillips, Crewe	493	9	8
P. G. Hemmings, Whitmore	389	15	6

Steelwork only—

Hill & Smith, Brierley Hill	134	10	8

MANCHESTER.—Pointing, &c., of the external walls of the Queen's-road car shed, for the Corporation:—

*H. Pemberton, Oldham.

MANCHESTER.—Alterations and additions to the "Red Lion" public house, Claremont-road and John-street, Rusholme, for Messrs. Walker & Homfray, Ltd., brewers, Salford:—

*J. Lindore, Salford.

MARTON.—New vicarage for the Rev. C. W. Macready, M.A., and Parochial Church Council. Mr. R. Martin, Diocesan Surveyor, 90, Deansgate, Manchester:—

*W. Cardwell & Sons, Marton.

MERTON AND MORDEN.—Interior painting and decorations at 387 houses at Claremont-avenue and on the Whatley estate, for the U.D.C.:—

*H. E. Shaw, Raynes Park £1,595

MERTON AND MORDEN.—Interior and exterior decorations at the Council Offices, for the U.D.C.:—

*G. C. Wood & Sons, Merton £104 2

MIDDLETON. — Construction of Garden of Remembrance and erection of a War Memorial in Town Hall Grounds. Messrs. Taylor & Simister, F.R.I.B.A., architects, 29, Queen-street, Oldham:—

*Grundy, Sons & Co., Middleton £2,450

Excavating, draining, concreting and brickwork—
*J. F. Dempsey, Middleton 1,860

Carpentry and joinery—
*R. Taylor, Middleton 500

NEWCASTLE-ON-TYNE.—Branch premises at Cowgate, for the Newcastle Co-operative Society:—

*Building Department, Co-operative Wholesale Society, Ltd., Newcastle.

NEWQUAY.—Constitutional club and shops at Gover-road, Newquay. Mr. J. Ennor, architect, 61, Tower-road, Newquay.

*W. O. McGuigan & Son, Newquay £2,750

NORTH DUBLIN. — Additional room to a labourer's cottage at Convent View, Cabra, for the R.D.C. Mr. F. P. Russell, engineer, 7, D'Olier-street, Dublin:—

J. McElvenna	£198 10
*J. Gilmore	130 0

(All of Dublin.)

OAKHAM.—Four houses at Somerby, for the R.D.C.:—

*A. J. Stimpson ..... £473 each

ONGAR.—For houses, for the R.D.C.:—

Six houses at Shelley—
*F. M. Noble & Son £2,361 0

Four houses at Norton Mandeville—
*W. W. G. Parker 1,645 15

Four houses at Blackmore—
*H. G. Acres 1,659 0

PLESHEY.—Reconstruction of the bridge, for the Essex C.C.:—

*A. G. Wicks, Braintree £1,461 8 6

PRESCOT.—Painting and decoration of interior of (*a*) 28 houses, and (*b*) 84 houses (external), at "The Wood," for the U.D.C.:—

(*a*) *J. Appleton, Prescot	£322
(*b*) *A. & H. Taylor, Prescot	310

PRESTATYN.—Twenty-eight houses on the Dawson estate, for the T.C.:—

*R. Williams, Colwyn Bay £12,586

PRESTON.—Iron railing for the north-east corner of Ribbleton-park, for the C.B.:—

*T. Blackburn & Sons, Ltd. £107 6 8

ROCHDALE.—Electric lighting and power installations to 128 houses on the Albert Royds-street housing estate, for the C.B. Borough Surveyor:—

*R. D. Sedgwick, Rochdale.

ROCHDALE.—Ferro-concrete and incidental work required in the construction of main stores at the Electricity Works, Dana-street, for the C.B. Borough Surveyor:—

*R. & T. Howarth, Rochdale.

ROCHDALE.—120, or alternatively 240, brick houses, lined with asbestos sheets, on the Dicken Green estate, for the C.B. Mr. S. H. Morgan, Borough Surveyor:—

238 houses—*Selwood & Lloyd & Co., Birkenhead.
22 houses—*P. A. Baines, Preston.

ROCHDALE.—Painting 20 houses on Turf Hill estate, for the Housing Committee. Borough Surveyor:—

*Kennedy & Son, Rochdale.

PEWSEY.—Erection of 60 houses in various parishes, for the R.D.C. Messrs. Walker & Bickford, architects, Market-square, Pewsey:—

Building & Public Works Construction Co., Ltd., London	North Tidworth.	Pewsey.	Upavon.	Ludgershall.	Burbage.	North Newnton.	Wilcot.	Easton Royal.	Milton.	Woodborough.
	*462 18 4	*512 10 0	*494 0 0	*467 10 0	548 15 0	*480 15 0	*480 15 0	525 0 0	482 10 0	510 0
W. E. Chivers & Sons, Ltd., Devizes	515 0 0	597 0 0	525 0 0	524 0 0	—	519 0 0	525 0 0	—	—	529 0
Huntley & Son, Woodborough	—	—	—	—	—	505 0 0	—	—	—	*505 0
J. Franklin, Marlborough	—	—	—	—	—	—	—	549 17 6	515 0 0	—
S. S. Gilbert & Sons, Wilcot, Marlborough	—	—	—	—	—	—	508 0 0	—	499 5 0	—
Hoskings Bros., Newbury	—	621 0 0	573 0 0	—	—	—	—	—	—	—
E. Howse, West End, Pewsey	—	571 0 0	—	—	601 0 0	—	495 0 0	529 0 0	485 0 0	—
D. Hatcher, Ludgershall, Andover	—	—	—	561 0 0	—	—	—	—	—	—
James & Crockerell, Salisbury	—	—	—	—	—	—	—	—	—	—
P. C. King, Pewsey	—	669 0 0	606 0 0	—	595 0 0	520 0 0	525 0 0	533 0 0	501 0 0	525 0
Minty & Swatton, Marlborough	—	568 0 0	570 0 0	—	*527 19 6	—	—	*497 17 0	*462 17 6	—
F. Rendell & Sons, Devizes	—	—	—	—	—	540 0 0	—	—	—	—
Sturgess Bros., Ludgershall, Andover	546 10 0	605 0 0	546 0 0	—	—	—	—	—	—	—
		—	560 0 0	515 0 0	—	—	—	—	—	—

ST. HELENS.—An open-air school for the E.C. Messrs. Biram & Fletcher, FF.R.I.B.A., architects, George-street :—
Roof tiling and plastering—*W. H. Davey & Co., Runcorn.
Plumbing, painting, &c.—*G. A. Critchley, St. Helens.

SALFORD.—Static transformer sub-station in Woodhill-drive, Prestwich, for the C.B. :—
*S. & S. K. Sambrook, Prestwich..... £290

SALFORD.—Static transformer sub-station in Back Gardner-road, Greengate Park estate, Prestwich, for the C.B. :—
*E. B. Jones & Rawlinson, Ltd..... £335 10

SCARBOROUGH.—For houses for the Corporation :—
*A. Lyon (six houses) £2,340
*Platt & Featherstone (house) 619
*Hackson & Oates (two bungalows).... 963

SHANKLIN.—Reinforced concrete shelter on the Homecliff Promenade, for the U.D.C. Mr. P. G. Cocks, Engineer and Surveyor :—
F.C. Construction Co., Ltd., Derby.... £675
W. Brown, Sandown, Isle of Wight.... 475
†J. Ball & Son, Cowes, Isle of Wight.. 465

SHEFFIELD.—Thirty parlour-type houses on the Longley estate, for the T.C. Mr. W. Geo. Davies, A.R.I.B.A., City Architect :—
*J. Laver & Sons, Ltd., Sheffield.

STEYNING, EAST.—Twenty houses at Carden-avenue, Patcham, for the R.D.C. Mr. G. W. Warr, Surveyor, Town Hall, Southwick :—

	Alternative tenders.				
	£		£		£
T. White, Haywards Heath	4,500	..	6,800	..	6,950
T. & H. Bartlett, near Haywards Heath	4,142	..	5,835	..	6,237
James Bodle, Eastbourne	4,130	..	6,645	..	6,745
Sherren, Ltd., Pulborough	4,079	..	5,985	..	6,141
‡P. W. Gladstone & & Co., Brighton	3,700	..	5,235	..	5,415

STOCKTON-ON-TEES.—New Sunday schools, for the parochial Church Council of St. Paul's, Bishopton-road. Mr. J. W. Moscrop, F.R.I.B.A., diocesan architect, Feethams, Darlington :—
*A. J. Cooke, Stockton.

STOKE-ON-TRENT.—Electric wiring of the first 100 houses on the Abbey, Bucknall (No. 2) site, for the C.B. :—
*Hawley & Ingram, Stoke..... £640

STOKE-ON-TRENT.—Forty-eight houses on the Acres Wood-lane site, Burslem, for the T.C. :—
*G. M. Sambrook, Burslem..... £25,920

STOKE-ON-TRENT.—Wiring and fitting eight "all-electric" houses in Avenue-road, Hanley, for the Corporation. Electrical Engineer, St. George's Chambers :—
*Hawley & Ingram, Stoke-on-Trent.... £264

STRETFORD.—Heating, &c., of the new open-air school at Longford Park, including the special heating of the floors and classrooms, for the E.C. Mr. Percy Howard, A.R.I.B.A., architect, 88, Mosley-street, Manchester :—
*Seward & Co., Ltd., Preston £558

SURBITON.—House for the Superintendent at the Alexandra Recreation Ground, Surbiton, for the U.D.C. :—
*Thorogood Bros. & Son, Surbiton..... £900

THORNE.—Installation of heating apparatus at Thorne Hall, for the R.D.C. :—
*H. Thrush & Co.

WHITEHAVEN.—108 houses, for the T.C. :—
*J. Leslie & Sons..... £45,672

WILLESDEN.—New greenhouse at the Willesden New Cemetery, for the U.D.C. :—
*Weeks & Co..... £250 17 6

WINDLESHAM.—Ten houses at Lightwater, for the U.D.C. :—
J. Corbett, Bagshot £3,798 15
Childs & Shee, Woking..... 3,785 0

WORKSOP.—Rebuilding of the "Swan" Inn in Castle-street. Messrs. W. H. Lancashire & Son, architects, of Montgomery-chambers, Harlstead, Sheffield.
General contractors—*S. S. Middleton & Sons, Ltd., Galeford-road, Worksop.
Steelwork—*T. W. Ward, Ltd., Sheffield.
Plumbers—*H. Braithwaite & Co., Ltd., Sheffield.
Plasterers—*Marshall & Outram, Sheffield.
Reinforced concrete—*Hodkin & Jones, Ltd., Sheffield.
Tilers—*Pattinson & Co., Ltd., Sleaford.
Faience work—*Pilkington's Tile and Pottery Co., Clifton Junction.
Wood-block flooring—*Hollis Bros. & Co., Ltd., Hull.

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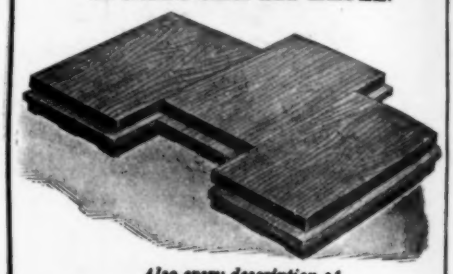
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